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Evaluation Unit
Corporate Services Branch

Project Leader Tracer Study

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CANADA

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Abbreviations

ASRO	Regional Office for Asia
EARO	Regional Office for Eastern and Southern Africa
GAD	Gender and Development
GSD	Gender and Sustainable Development
IDRC	International Development Research Centre
IDRIS	Inter-Agency Development Research Information System
LACRO	Regional Office for Latin America and the Caribbean
MERO	Regional Office for the Middle East and North Africa
NEWPINS	New Project Information System
NGO	Nongovernmental Organization
PCR	Project Completion Report
ROSA	Regional Office for South Africa
SARO	Regional Office for South Asia
SPSS.PC+	Statistical Package for the Social Sciences Plus
WARO	Regional Office for West and Central Africa
WID	Women in Development

Foreword

The *Project Leader Tracer Study* is a "strategic" evaluation. It looks back on 25 years of experience in supporting research and assesses IDRC's performance in strengthening development research capacity in the South. Seeking the perspectives of scientists supported by IDRC, the study surveyed a representative sample drawn from over 4,000 project leaders and conducted face-to-face interviews with fifty of the survey respondents. The resulting report combines statistical data and information with a richly personal flavour; quantitative findings are illustrated and interspersed with quotes from individual researchers. The results reflect on the performance of programs across the Centre.

The study asked past project leaders whether IDRC support played a role in their scientific careers and in their capacity to contribute to Southern development. We wanted to know what worked and how things could be improved. Our intention was to influence decision-making and planning in IDRC and perhaps elsewhere. As many agencies respond to challenging conditions by redefining their roles in the delivery of development assistance, learning about what works becomes crucial. This study is intended as one building block in a learning process whereby IDRC taps the experience of its Southern constituents and listens to the voices of those in whom it has invested. Like all research supported by IDRC, the value of this study will be determined by the extent to which its findings are put to use.

Obtaining and analyzing information from a representative sample of researchers, supported during a 25-year period and scattered around the southern hemisphere, was a big job. First, gratitude is due to the patient and cooperative project leaders who gave time and insight responding to an extensive questionnaire and to long, probing interviews. Among the many hands which helped collect the data and supported the authors in molding it to its present form were the staff of the Evaluation Unit and an advisory group of IDRC program staff. Philip Ward originally designed the study and set up the data collection process. Bohdana Dutka managed the interviewing and data analysis. Cerstin Sander supported the final editing and production. The advisory group helped us keep the programme perspective and commented on draft after draft; and Michael Graham contributed the final editing touches.

If, having read this study, you would like to add or request further information, you are welcome to contact IDRC's Evaluation Unit at the coordinates given below.

Ottawa, March 1996

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Executive Summary

During its first 25 years, the International Development Research Centre (IDRC) has supported over 4000 project leaders. This study is the first aggregate assessment, from the perspective of the project leaders, of the impact of this support. Based on a questionnaire survey and interviews of a sample of project leaders, the study sought to: obtain an historical overview and demographic profile of the project leaders; assess the capacity-building effect of IDRC-supported research projects on project leaders; document the effectiveness of IDRC support and the level to which the Centre has met part of its corporate objectives; and generate lessons learned for Centre-wide policymaking, project development and design, and training.

The report summarizes survey and interview results and discusses them in the context of the study's objectives. Analysis of the data suggests potential strengths and weaknesses. The report flags areas of concern rather than offering any direct recommendations.

Profile

- IDRC works with highly educated individuals. More than half (53%) of first-time project leaders had already obtained a doctoral degree, 27% had a masters', and 15% a bachelors' as their highest degree.

- More than half (57%) of the project leaders had studied in North America, Europe, or Australia; the remainder (43%) had obtained degrees in their home regions.

- The proportion of female to male project leaders has remained relatively low over time (on average 1:4). In recent years, the percentage has decreased (from 27% in 1986–1990 to 20% in 1991–1994).

- Ninety-six percent of past project leaders are presently employed. Most (69%) report that they work at either a university or research institution and are primarily involved in research activities.

- Over the years, IDRC has tended to work with increasingly older and more experienced researchers. Whereas about 70% of all project leaders in 1970–1980 were between the ages of 20 and 39 years, in 1991–1994, the figure for this same age group had fallen to 32%.

- Since 1970, the average level of previous work experience possessed by first-time project leaders nearly doubled from 10.6 years to 19.2 years.

Results

The survey showed that, in the view of project leaders, IDRC's program delivery and support practices have facilitated capacity building. More specifically, IDRC's project support was an important way for project leaders to strengthen skills, influence research approaches, enhance status, and improve their ability to influence policymaking:

(1) In addition to training activities, IDRC's method of allowing researchers to take full control of all aspects of their projects was perceived as extremely beneficial in **developing skills**. For example, communication skills were honed "on-the-job" while writing progress reports or presenting papers at conferences.

(2) IDRC affected project leaders' **perceptions of development issues and concepts**. Project leaders reported gaining new research perspectives through interactions with program staff and fellow researchers at conferences and as part of their project work. Project work also helped put theory into practice.

(3) IDRC had an impact on the **career, contacts, and confidence of individual project leaders**. Project leaders reported that IDRC's most important influence on their careers had been to link them to national and international networks of other researchers and organizations. Professional confidence gained through project work also helped to advance their careers.

(4) Project leaders' involvement in IDRC-supported projects **strengthened their ability to influence policymaking**.

Findings

- Project leaders were asked to rate the impact that IDRC project support had on eleven skills. For every skill, at least 90% of respondents felt that IDRC support had enhanced their skills to some degree.
- Of all the skills project leaders reported to have been "greatly improved," "project management," "leadership," and "communication" skills were rated the highest by the greatest number of project leaders (72%, 65%, and 54%, respectively).
- An inverse relationship existed between project leaders' age and level of experience and the proportion who reported "great improvement" in certain skills, i.e., for certain skill types, younger, less experienced researchers significantly improved their skills relative to their older, more experienced colleagues.
- The percentage of project leaders who reported very extensive collaboration with program staff declined from a high of 76% in the 1970s to 55% in 1991–1994.

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They used project findings to inform public policymaking and used their gained expertise, knowledge, and contacts to influence policy as academics, government bureaucrats, or members of the NGO community.

(5) Project leaders **highly valued their direct contact with program staff because of the professional benefits it brought to them** (e.g., exposure to new research perspectives and methods, assistance with networking) **and the value it added to their research** (e.g., assistance with project design, networking, accessing information).

(6) **IDRC's approach to program delivery was perceived by project leaders to be decentralized, flexible, and responsive, and this enabled them to pursue research effectively.** This approach engendered a sense of self-empowerment by placing control of research in their hands. Project leaders also reported that Centre staff were sensitive to changing situations and that this gave them the freedom to shape projects to meet local needs.

(7) **IDRC project support brought researchers and research users closer together in mutual cooperation.** Community-oriented research encouraged project leaders to find ways to have their research informed by local realities and allowed communities to benefit from the use of research results.

- One-third of project leaders reported that collaboration and contact with program staff had greatly supported their career advancement.

- Sixty percent of respondents reported that IDRC's most important influence on their careers had been in linking them to networks of other researchers and organizations. In so doing, project support gave them the opportunity to contact the best researchers in their relevant fields, to develop links with policymakers, and to enhance their profile and reputation within the national and international research community.

- Project leaders were asked to rate the influence that IDRC had had on the adoption of new research approaches. They reported that IDRC had the greatest "positive influence" in promoting the "utilization of research results" (84%) and the "need for multidisciplinarity" (78%). IDRC had the least influence on "gender considerations" in research (35%).

- A large number of project leaders learned of the Centre through its outreach activities: from program staff (28.7%), through Regional Offices (13.6%), or IDRC publications (10.1%).

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Outlook

This study documents some of IDRC's contributions to research communities in the South. At the same time, it underscores changes in the demographic and professional profile of project leaders and in their perceptions of IDRC's program delivery and support practices that suggest potential areas of concern.

(1) **Age and Level of Experience:** For certain skill types, younger, less experienced researchers significantly improved their skills relative to their older, more experienced colleagues. IDRC has tended to work with increasingly older and more experienced researchers. Although it is true that younger researchers often work as junior members of research teams, this approach may not develop the same skills in project management they would learn as project leaders.

(2) **Direct Contact in Building Capacity:** Direct contact between staff and researchers has been an important source of IDRC's effectiveness in capacity building. The perceived decline in direct contact between program staff and project leaders may indicate constraints that have potential ramifications for capacity building and the quality of research results. This raises the question of whether networks can compensate for this decline in direct contact. Many project leaders expressed the need for even greater contact with program staff, and this may indicate a gap between needs or expectations and the actual support provided.

(3) **Restructuring and its Impact on Program Delivery:** Project leaders reported that communication suffered during periods of restructuring as project responsibilities were shifted between Program Officers or Regional Offices, that they received little project support, and that their messages to program staff went unanswered. These types of problems underscore the need for IDRC to have a better system in place to sustain project support during periods of restructuring or staff turnover.

(4) **Women in Research:** IDRC's progress in addressing gender imbalance among project leaders has been modest. Although these findings may reflect historic gender imbalances within Southern research communities, IDRC may be able to formulate some response to redress the balance.

(5) **Reporting Mechanism:** This study illustrates that former IDRC project leaders have valuable insights into the Centre's operations. A reporting mechanism (e.g., recipient PCR) that allowed project leaders to share these insights on a regular basis might prove useful.

This study affords IDRC a valuable opportunity to assess the strengths and weaknesses of its support to project leaders. As it evolves and redefines itself in the mid-1990s, the challenge for the Centre is to build on its traditional strengths in research support and to explore new methods to deliver that support efficiently and effectively.

Oliver Sagna

Tasilo J. Mahukwi

Soungalo Traore

I have learned to understand the responsibilities and difficulties [of project work], and how to cope with them. I have also learned how to write reports and monitor a project. It was important for me because it is not the same as a university where work is done on an individual basis. As project leader I have learned to manage human resources ... and above all else to work as a team.

One of IDRC's gaps is its failure to provide follow-up support to take advantage of the results after projects are completed. The Centre could develop cooperative policies with industry, for example, to carry on with the results.

Introduction

The Act of Parliament that created the International Development Research Centre (IDRC) assigned the Centre a unique role among Canadian institutions and a distinctive place among international development agencies. Its role has been to create, maintain, and enhance research capacity in developing countries in response to needs determined by the people of those countries.[1]

Stated succinctly, IDRC's mission is ***empowerment through knowledge***. Knowledge is considered a key element in the development of nations, peoples, communities, and individuals. "Research provides the means for the acquisition of appropriate knowledge and, hence, for development. The capacity to conduct research, therefore, is seen as a necessary condition for empowerment."[2]

IDRC helps researchers in developing countries identify sustainable, long-term, practical solutions to pressing development problems. This assistance takes the form of funding for research projects designed and managed by recipients and monitored by IDRC program staff. Although funding typically goes to an institution, it is an individual from that institution who is designated as the coordinator or project leader. The project leaders assume responsibility for the research and receive support from their institutions for administrative management, accounting, and reporting.

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1 According to the IDRC Act, Chapter I, Section 4 (1), "The objects of the Centre are to initiate, encourage, support and conduct research into the problems of the developing regions of the world and into the means for applying and adapting scientific, technical and other knowledge to the economic and social advancement of those regions."

2 Empowerment Through Knowledge: The Strategy of the IDRC. Ottawa: IDRC, 1993.

The approximately 5000 projects IDRC has funded in the past 25 years have been managed by 4240 project leaders. Given this scope of IDRC's collaboration and its potential capacity-building effect, it is useful to document and evaluate its impact. This strategic evaluation provides the first representative assessment of IDRC's effectiveness in building research capacity at the individual level.

This study traces past IDRC project leaders from Southern countries.[3] Although project leaders often work with several other researchers and administrative and technical staff, for logistical reasons the unit of analysis for the investigation is the project leader. As such, this study does not capture the full extent of IDRC's efforts to build research capacity in individuals in the South.

Objectives of the Study

The objectives of the study were to:

- Provide IDRC with an **historical overview and demographic profile** of the project leaders it has supported;
- **Assess the capacity-building impact** of IDRC-supported research projects on individual project leaders;
- **Document the effectiveness of IDRC support** and the level to which the Centre has met this part of its corporate objectives; and
- Generate **lessons learned** for Centre-wide policymaking, project development and design, and training.

Self-administered questionnaires mailed to a representative sample of former project leaders (referred to as "respondents") and face-to-face interviews (referred to as "interviewees") were used to gather data related to five key issues: the demographic, professional, and educational profile of past project leaders; their individual goals and achievements; project leaders' relationship with IDRC – past and present; areas of IDRC support that promote individual capacity-building; and the experience of female project leaders. Details of the methodology are given in Appendix A.

It is important to note that the study does *not* attempt to make any direct causal link between researchers' involvement with IDRC and where they are now. Given the

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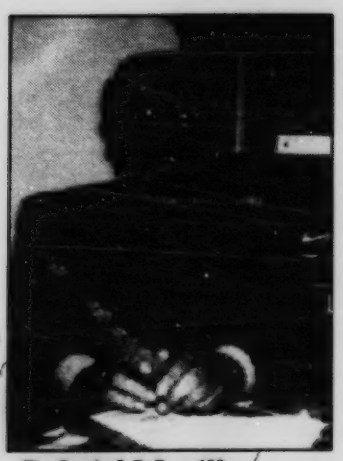
IDRC occasionally supports projects with project leaders from Northern countries. These project leaders have been excluded from this study. In most cases, capacity-building is not an objective of IDRC support in these projects. Rather, these projects tend to strengthen institutional affiliations and promote North–South collaboration between researchers working on related topics. A recent study that examines this issue is: Zollinger, Marcel. An Evaluation of Cooperative Projects Supported by the International Development Research Centre. Ottawa: IDRC, May 1995.

immense number of intervening variables at play in the career paths of individuals, it is difficult to identify the specific role IDRC has had. What the study does, however, is identify areas where project leaders reported that involvement in an IDRC-funded activity supported their professional development.

Organization of the Report

The report profiles the researchers using descriptive demographic, academic, and career statistics, charts the evolution of the relationship between IDRC and the project leaders it has supported, and explores the Centre's capacity-building impact on project leaders in three areas: improvements in skills, influence on their perceptions of development issues, and career advancement. The development impacts that have flowed from IDRC projects are then reviewed from the perspective of the project leaders, and the implications of the main findings of the study are discussed. Details on various aspects of the methodology of the study are presented in the Appendix A.



Gabriel Murillo

Pilar Vergara

Marcela Gajardo

By giving me a higher profile within the department and by increasing my professional skills, the IDRC project has enabled me to obtain funding support from other international donors.

Halfway through the project we were reassigned to a different Regional Office and communication problems became serious.

IDRC permitted me to develop professionally in my country. Otherwise, I would have had to go abroad and not come back: there was no alternative.

Profile of IDRC Project Leaders

Introduction and Summary of Findings

Demographic, academic, and professional statistics for project leaders are described and analyzed. Since its inception, IDRC has tended to work with increasingly older and experienced researchers, the majority of whom are male. Project leaders are generally highly educated: 80% hold a masters' or doctoral degree. The majority pursued their higher education at Northern institutions (North America, Europe, or Australia); the remainder obtained degrees in their home regions. Almost 96% reported that they were presently employed, usually in universities or research institutions, and were active in managing research projects, presenting papers at professional meetings, and preparing proposals for research funding. One-third of employed project leaders also held a second job.

Demographic Profile

Gender

Female project leaders have historically been outnumbered by their male counterparts. Variations in the proportion of male to female project leaders exist between regions. The ratio was 16:1 in MERO and 2:1 in LACRO.[4]

The highest percentage of female project leaders (27%) was recorded for 1986–1990. This increase over previous years (nearly a doubling) and the relative decline thereafter probably reflects greater emphasis and resources directed toward WID and GAD issues by the Centre during these 5 years. The decline in funding also reflects

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4 For more discussion on women in IDRC-funded research see "Gender Considerations", p. 30 and p. 51, "Women in Research".

an attempt by the Centre to "main-stream" gender so that it was no longer a separate budget or project category.

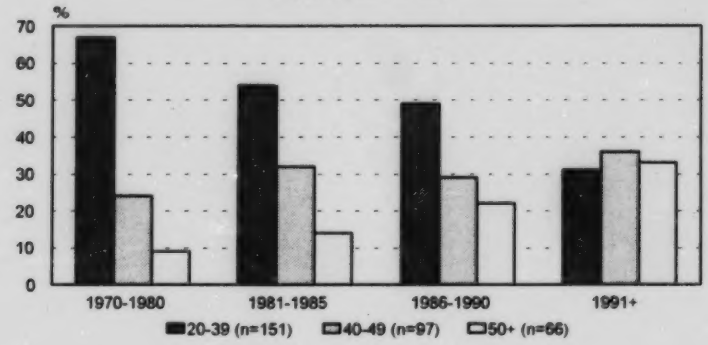
Age

The majority of first-time project leaders were between the ages of 30 and 39 years (44%) or 40 and 49 years (31%). In comparison, 18% were between the ages of 20 and 29 years, 3% were between 50 and 59 years, and 4% were over 60 years old. No significant difference was found between regions in terms of age distribution. These figures suggest that IDRC tends to work with researchers at the midpoint of their career.

Age by Project Year

Examining the age distribution of project leaders by project year revealed that, over time, IDRC has tended to work with increasingly older scientists. The proportion of project leaders aged 20–39 years who managed IDRC-funded projects declined from a high of about 70% in the 1970s to approximately 30% in 1991–1994 (Figure 1). The share of projects managed by researchers aged 40–49 or 50+ years increased over the same time. This trend has important implications for some aspects of IDRC's capacity-building efforts, because capacity building (as measured by increases in certain skills) tends to decrease with age.

Figure 1: Age Distribution of Project Leaders (by Project Year)



Academic Profile

Level of Education and Disciplines

IDRC works with highly educated individuals. Over half of first-time project leaders (53%) had already obtained a doctoral degree; 27% had obtained a master's degree, and 15.3% a bachelor's degree (Table 1). The majority (89.4%) studied either the natural or social sciences; only a small percentage

Table 1: Level of Education of Project Leaders (n=300)

Degree	%
Doctoral	53.0
Master's	27.0
Bachelor's	15.3
Technical	2.7
Other	2.0

held degrees in other disciplines such as business, the arts, or mathematics (Table 2). Project leaders pursued their higher education primarily at Northern institutions (North America, Europe, or Australia). The remainder obtained degrees in their home regions (Table 3).[5]

Table 2: Disciplines Studied by Project Leaders (n=301)

Discipline	%
Natural sciences	52.5
Social sciences	36.9
Business	3.0
Arts	2.0
Mathematics	2.0
Other	3.0

Table 3: Where Project Leaders Obtained their Degrees (n=293)

Location	%
Northern Institutions	57
LACRO Region	16
ASRO Region	13
SARO Region	5
EARO Region	4
WARO Region	3
MERO Region	1

Further Study

Since completing their IDRC-supported research project, only a small proportion of respondents have gone on to complete further degrees (17%). The majority of these degrees were either at the masters' or doctoral level. The interviews revealed that some researchers had obtained their degrees as a result of direct IDRC support for their studies; for others, the subject matter studied and methodology used were influenced by their project experience with the Centre.

Professional Profile

Years of Work Experience

Years of work experience gained prior to becoming an IDRC project leader ranged from one to 45 years; the average was 15.2 years. The averages in each region are shown in Table 4.

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5 IDRC divides its Southern operations into seven regions, each with its own Regional Office: SARO Representative Office for South Asia; ASRO Regional Office for Asia; WARO Regional Office for West and Central Africa; EARO Regional Office for Eastern and Southern Africa; ROSA Regional Office for South Africa; MERO Regional Office for the Middle East and North Africa; and LACRO Regional Office for Latin America and the Caribbean. For the purposes of this study, regional analysis reflected these administrative divisions.

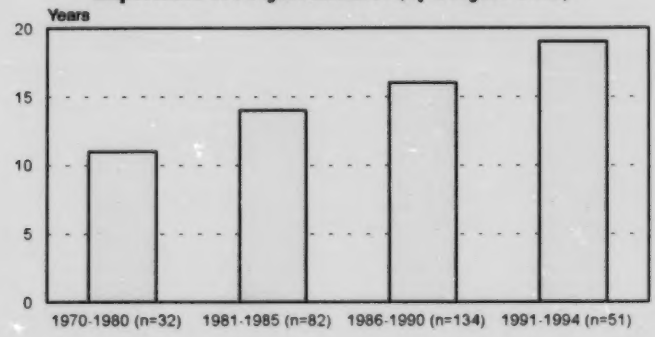
Table 4: Average Number of Years of Previous Work Experience of Project Leaders

Region	n	Experience (Years)
Overall	**289**	**15.2**
SARO	27	17.7
ASRO	89	16.5
LACRO	81	16.0
MERO	16	15.4
WARO	35	11.8
EARO	41	11.5

Changes in the Level of Work Experience Over Time

Over the years IDRC has tended to work with more experienced project leaders. An examination of average work experience by project year revealed that the level of experience possessed by project leaders almost doubled from 10.6 years in 1970–1980 to 19.2 years in 1991–1994 (Figure 2).

Figure 2: Average Number of Years of Previous Work Experience of Project Leaders (by Project Year)



This parallels the upward trend in the age of project leaders. One hypothesis to explain this phenomenon is that the upward trend in project size mirrors a trend toward larger and increasingly complex projects that would require senior researchers with more experience. However, no correlation was found between the experience of the project leaders and project size (as measured by budget). As with age, this trend has implications for IDRC's capacity-building efforts because the impact on capacity (measured by increases in skills) tends to decrease with age and level of experience.

Experience with other Funding Organizations

Approximately 40% of past project leaders indicated that they had received research support or grants from other international funding organizations prior to becoming a project leader. These include UN agencies, the Ford Foundation, the World Health

Organization, the International Foundation for Science, and The United States Agency for International Development. The average grant amount from other donors was $312,461 with grants ranging in size from as low as $100 up to $5 million.

Position Within Recipient Institution

Most project leaders (84%) held mid-level or senior staff positions when they first became involved with IDRC (Table 5).

Table 5: Position of Project Leaders Within Organization (n = 306)

Position	Number of Respondents	%
Senior staff (director, manager, dean, senior executive)	140	45.8
Mid-level staff (program officer, professor, middle manager)	117	38.2
Junior staff	11	3.6
Consultant	7	3.2
Student	2	0.7
Other	29	9.5

Activities as IDRC Project Leader

Project leaders were asked to rank the extent to which they participated in different project-related activities while being supported by IDRC (Table 6). Conducting research or managing research were ranked first by the majority of project leaders; whereas, contributions to journals or publications and participation in national and international conferences were lowest on the list.

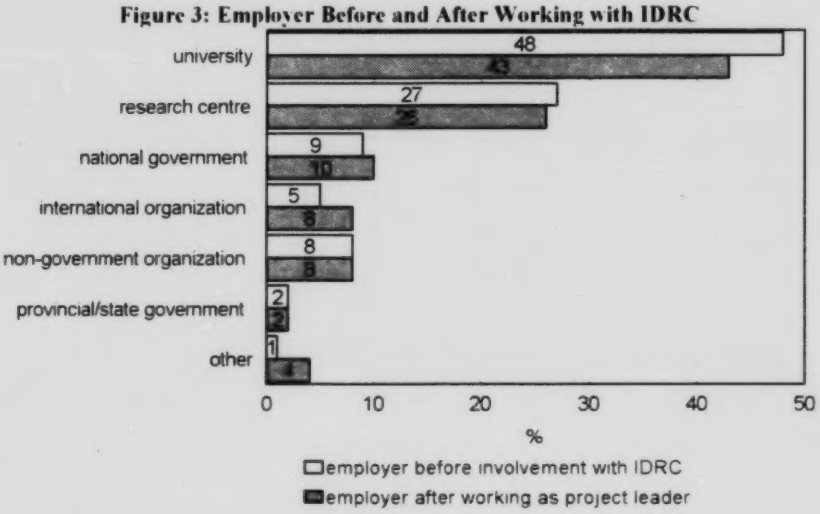
Table 6: Activities as IDRC Project Leader (n=295)

Activities	Number of Respondents	%
Conducting research	140	48.1
Managing research	114	38.6
Administration	53	19.3
Teaching	31	15.3
Networking	25	11.3
Contribution to journals or publications	16	6.6
National conferences, seminars, workshops	14	5.4
International conferences, workshops, seminars	11	4.6

Employer Before and After Working With IDRC

The majority of project leaders were employed by universities or research institutions prior to and following their project work with the Centre (Figure 3). A slight drop was measured in the proportion employed at these institutions over time. This was matched by an increase in the proportion of project leaders working for national governments and international organizations.

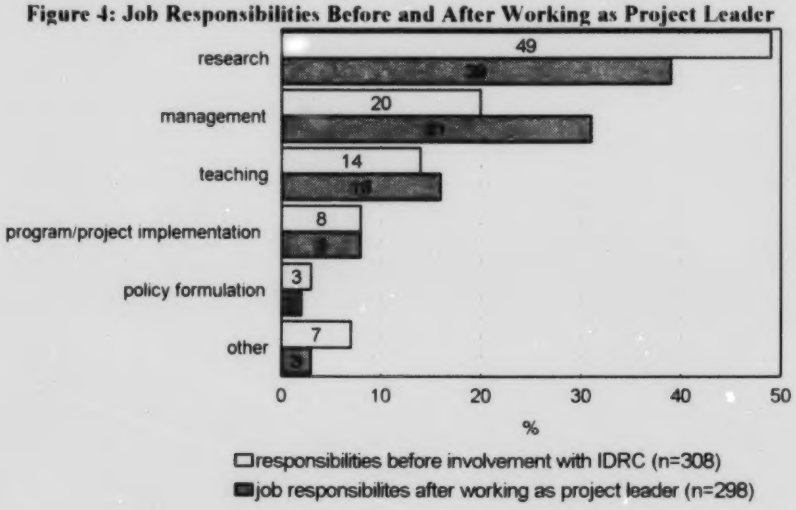
Figure 3: Employer Before and After Working with IDRC



Job-Related Responsibilities Before and After Working With IDRC

Changes occurred in the type of work performed by respondents before and after becoming a project leader. Generally, direct involvement in research declined and management activities increased (Figure 4).

Figure 4: Job Responsibilities Before and After Working as Project Leader



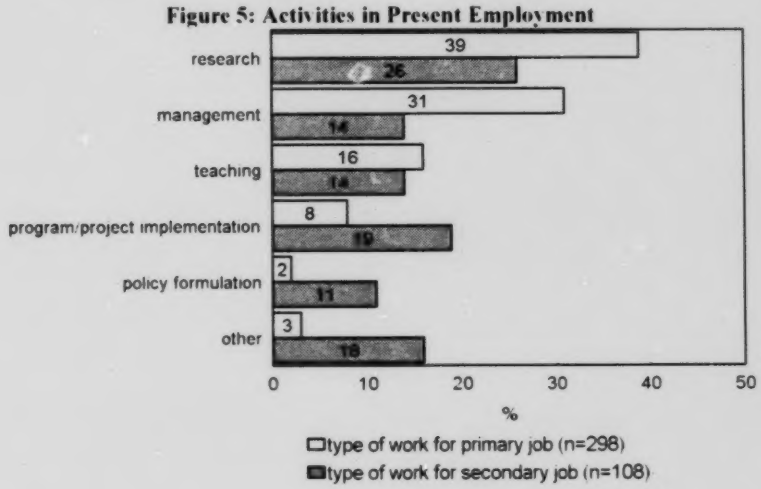
Present Employment Status

Most project leaders (96%) reported that they were employed at the time of the survey, and 34% indicated that they worked at more than one job.

Activities in Present Employment

Respondents indicated that, since becoming a project leader, they had been extremely active in managing research projects, presenting papers at professional meetings, and preparing proposals for research funding, and moderately active in contributing to professional journals, working on consulting assignments, participating in missions for government, and formulating policy (Figure 5).

Figure 5: Activities in Present Employment



Participation in Activities not Related to Work

Outside their career, past project leaders were involved in various activities (Table 7). Eighty-eight percent were involved in professional and scientific associations, and more than 50% were involved in community service. Most (68.4%) indicated that their outside activities were related to research conducted while associated with IDRC.

Table 7: Activities of Project Leaders not Related to Work

Activity	%
Members of professional or scientific associations (n=308)	88
Community service (n=317)	51
Board membership (n=317)	50
Advocacy (n=317)	38
Volunteer work (n=317)	22
Lobbying (n=317)	12

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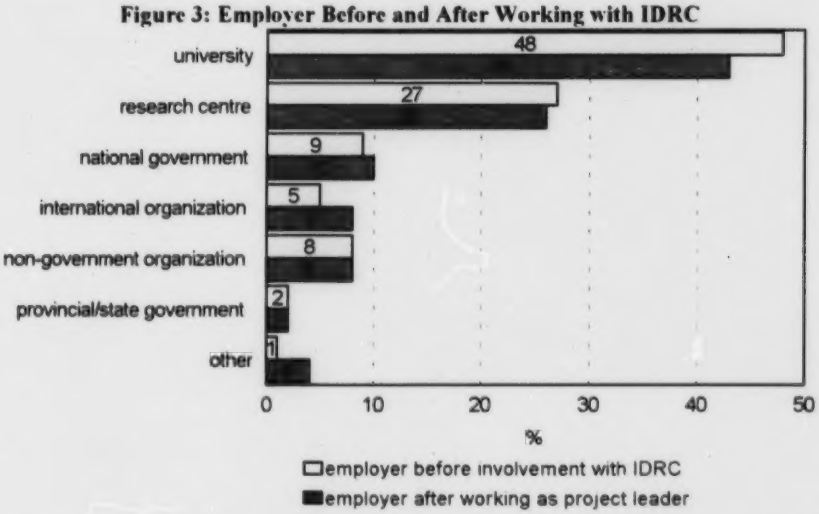

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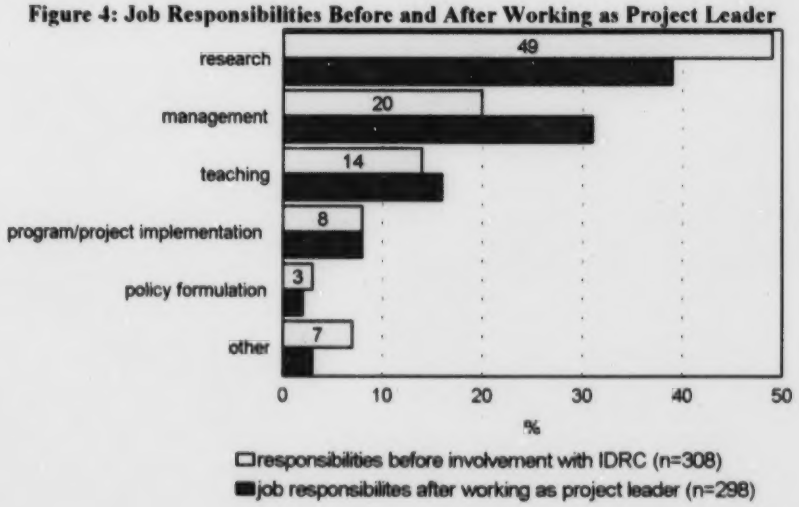

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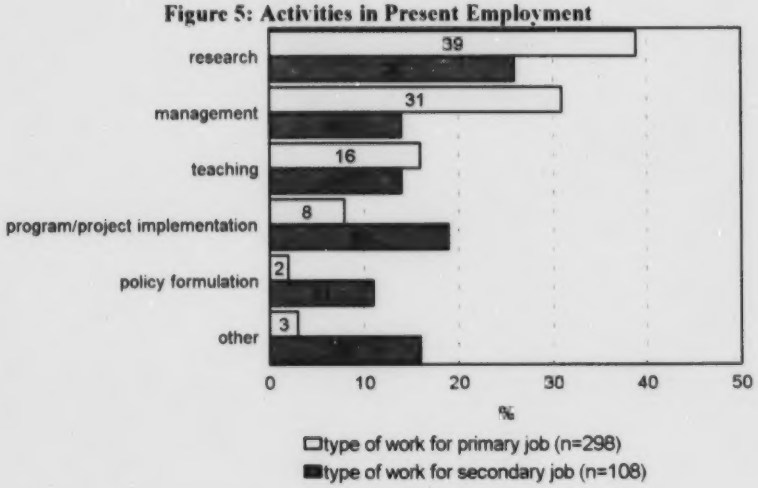

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Wan Razali

Mohammed G. Mohayidin

Girish G. Sohani

As a project leader, I was confident in being able to execute the project due to support received from IDRC Program Officers. This support included: (a) the use of discerning critical questions that led me to the preparation of the project document that became a blueprint for execution; (b) the provision of unsolicited relevant documentation; (c) assistance in the identification of a Canadian partner for the provision of a two-way exchange of information and experience; (d) the identification of relevant training seminars and conferences for strengthening the technical capability of the project leader and for networking.

Nature of Involvement with IDRC: Past and Present

Introduction and Summary of Findings

The nature of the relationship between IDRC and the project leaders it supports is explored. Although details of each project leader's association with the Centre are unique, a number of broad themes or issues emerged. Project leaders usually first heard of the Centre and its mandate from colleagues and a variety of IDRC outreach activities. They reported that their principal reason for approaching the Centre was not for funding support but for the non-pecuniary benefits that this relationship brought, such as assistance with research and publications and opportunities presented for networking. The fact that close to 70% of the respondents reported that they had maintained contact with Centre personnel after project completion suggests that they continue to value this relationship. Project leaders, however, were not perfectly satisfied with the level of IDRC collaboration. The level of "very extensive" collaboration (as ranked by project leaders) has declined overtime. During interviews, project leaders often blamed lapses in contact with program staff on staff turnover associated with Centre restructuring.

How Project Leaders Learned about IDRC

A large number of project leaders learned of the Centre through its outreach activities (Table 8): from program staff (28.7%); through Regional Offices (13.6%); and from IDRC publications (10.1%). Some project leaders remarked during the interviews that IDRC staff had actively approached them or their institution to solicit research proposals. Other meetings between program staff and prospective project leaders were more by chance than by design, often at national or

The Dean called one day and asked me to meet visitors from IDRC and a Canadian university. They came to discuss an idea for a joint project. We prepared a proposal together.

international conferences. Information and literature disseminated by IDRC also helped acquaint project leaders with methods for obtaining funding. For example, one project leader from WARO noted that he had learned how to submit a project proposal from an IDRC brochure delivered to his institution and had used it to design a project proposal.

Word of mouth seems to have provided IDRC with its second-best method of advertising. Just over 40% of respondents reported that they had heard about the opportunities for research funding and assistance with IDRC from their peers. During the interviews, it became evident that colleagues who had worked in various capacities with IDRC or who had attended IDRC-sponsored conferences often passed on information on their experiences to prospective project leaders. Equipped with this information, these researchers took the initiative and contacted the Centre. In a few cases, some project leaders were thrust into their relationship with IDRC without any prior knowledge of the Centre and its mandate when they took over a project from a colleague who had left their institution.

Table 8. How Respondents First Heard of IDRC (n = 317)

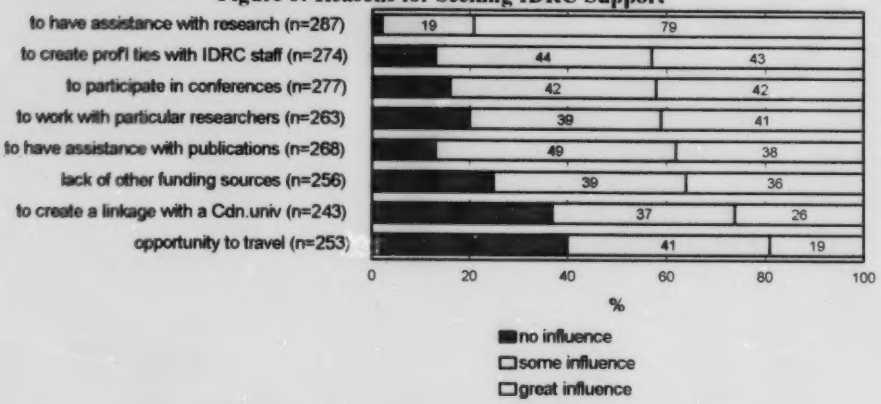
	No.[a]	%
IDRC outreach activities		
IDRC program staff	91	28.7
IDRC regional office	43	13.6
Through an IDRC publication	32	10.1
Through other researchers	127	40.1
Through previous IDRC project assistance	56	17.7
Other	20	6.3

[a] This column does not total 317 because some respondents gave more than one answer.

Reasons for Seeking IDRC Support

An overwhelming proportion of respondents (79%) indicated that they sought IDRC support to obtain assistance with their research. Also of consequence for project leaders were the opportunities their association with IDRC could afford them in terms of networking. More specifically, project leaders perceived that working with IDRC would provide opportunities to create professional ties with IDRC staff, to participate in international and national conferences, and to work with particular researchers of note in their fields of interest. The two least important reasons for approaching IDRC were the opportunity to travel and to create linkages with Canadian universities (Figure 6).

Figure 6: Reasons for Seeking IDRC Support



Regional Variations

Although project leaders in all regions indicated that they sought IDRC support primarily to obtain assistance with research, there were distinct regional variations in the rankings of the other seven factors. For example, project leaders from ASRO and EARO considered the opportunity to participate in conferences, workshops, and seminars as the second most important reason to work with IDRC; however, project leaders from SARO and MERO were more concerned with the opportunity to create professional ties with IDRC program staff. LACRO differed from most other regions by rating the opportunity to work with professional researchers as an influential reason for seeking IDRC support. Finally, WARO was the only region that rated assistance with publications and lack of other funding sources as important reasons for seeking IDRC support. The opportunity to travel was considered by project leaders from all regions as the least important reason for seeking IDRC support.

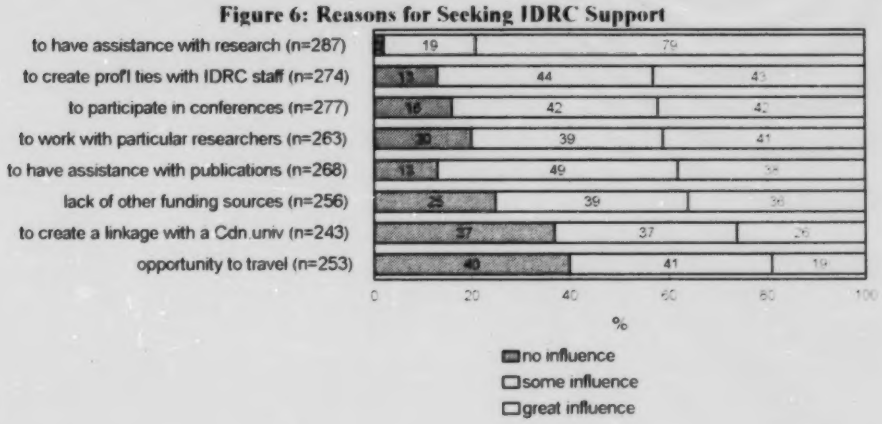
Nature of Relationship with IDRC Program Staff

Interaction with Program Staff

Much of the direct assistance offered by IDRC is provided by Program Officers who spend a significant amount of time and effort monitoring and supporting Southern researchers. Sixty percent of the respondents reported that they had enjoyed "very extensive" professional collaboration with IDRC Program Officers. Another 34.9% noted "some" collaboration.

Comments by interviewees suggested that these activities were valued because they gave ready access to a pool of expertise largely absent in their countries or institutions. Program Officers were used by project leaders for a variety of purposes: as sounding boards for project proposals; to deliver advice on project design; as

Figure 6: Reasons for Seeking IDRC Support



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sources of documentation to get a grasp of the "state of the art" of the topic under investigation; as reviewers to help refine ideas contained in technical reports; and as conduits through which project leaders could network with other researchers on common topics or issues of interest. Program Officers were commended for their prompt response to enquiries, their support "in front of the university authorities," and their aid in disseminating project results at the international level.

Another indicator of the value project leaders attached to their relationship with program staff was the extent to which collaboration with IDRC Program Officers supported their career advancement. Thirty-three percent reported that this collaboration had greatly supported their careers; another 44% indicated that it had been somewhat supportive.

Interviewees expressed concern over times when monitoring and support were not forthcoming. They recommended that collaboration, consultation, and liaison with Program Officers should increase in frequency and intensity. Project leaders often attributed breakdowns in monitoring to Centre restructuring and staff turnover. This suggests that communication suffers as projects are shifted between Program Officers and responsibility centres. This is particularly significant in light of the Centre's current downsizing and restructuring.

Somehow communication at the later stage broke down. We didn't get the feedback we requested. We were told that the department was undergoing a major reshuffle and therefore there was a communication problem.

I had little direct support from IDRC staff during project life and literally no feedback after the project, even when requested directly. This was disappointing. I understand several staff changes and shifts affected this.

There is some indication from the questionnaire data that the level of collaboration between project leaders and program staff has declined over time. The percentage of respondents reporting "very extensive" collaboration has steadily declined from a high of 75.8% in the 1970s to 54.7% in 1991–1994. Although the difference between the two numbers was not statistically significant, it may be evidence of a trend that should be monitored.

Finally, a small number (8%) of interviewed project leaders expressed their displeasure with the quality of assistance offered by the Program Officers. Some complained that the Program Officers assigned to them lacked the appropriate skills and expertise to effectively oversee the projects. Others were criticized for being "more interested in politics than research."

Administrative Relationship

Through the interviews it became apparent that some project leaders were not satisfied with the administration of fund transfers. These delays by IDRC or their own institution in dispersing funds caused delays in project implementation. Project leaders suggested that if they themselves had control over the funds instead of the institutions, the delays would become minimal. A few project leaders indicated that IDRC did not give enough responsibility to project leaders. Others felt they should receive pecuniary incentives to become project leaders.

> *I was quite impatient with delays in the administrative procedures to release funds – despite the payment schedule and our compliance with the remittance of reports, etc.*
>
> *There was a delay in the approval of project reports and the payment of grants.*
>
> *Sometimes the IDRC evaluation of progress reports is slow, causing delays in funding.*
>
> *A project leader who is part of an institution often finds that he has no access to funds when he needs them. This can hold up the completion of the project. There should be an agreement between IDRC and the various institutions that would allow project leaders to be more closely involved in handling the funds.*
>
> *The recipient should be much more accountable for how the money is spent.*
>
> *Being a project leader is a big responsibility which requires additional remuneration.*

Status of Involvement After Project Completion

A large proportion of the respondents reported that they continued to maintain contact with colleagues and workers encountered during their time as project leaders (Table 9).

Table 9: Colleagues with whom Project Leaders Remain in Contact after Project Completion

	No.	%
Fellow researchers (n=316)	258	81.6
Project co-workers (n=315)	249	79.0
IDRC program staff (n=315)	213	67.6
Government policymakers (n=316)	192	60.8
Development organization staff (n=315)	158	50.2
Extension workers (n=315)	142	45.1

The principal reasons for these contacts were for academic exchange (i.e., to obtain information on documents, seminars, and conferences) and project-related work (Table 10). Project-related work included either ongoing projects or proposals respondents were about to submit to IDRC for funding. Contact was also maintained for professional development and for personal or social reasons. Fewer than 10% of past project leaders indicated that contact was maintained for business or commercial reasons.

Table 10: Reasons for Maintaining Contact with Project Related Professionals (n=316)

	No.	%
Project-related work	227	71.8
Academic exchange	221	69.9
Professional development	172	54.4
Personal/social	160	50.4
Business/commercial	29	9.2

The frequency of contact with IDRC staff depended on the stage of the project. Project leaders working on ongoing projects tended to communicate with IDRC staff between two and three times annually. Otherwise contact was made only once a year or through chance meetings. Generally, project leaders kept in contact with program staff with whom they were involved at the time they managed the project. However, it is important to note that there were some complaints from project leaders that contact was abruptly halted after the project was completed. Post-project contact between IDRC staff and project leaders was also reported to have suffered due to staff turnover associated with restructuring.

Rarely have I received any information from or about IDRC after I finished my final report. IDRC seemed to vanish.

In the last years there were many changes in personnel at IDRC, making communication difficult.

Most of the Program Officers I was involved with were gone – either asked to leave for internal IDRC political reasons or due to down-sizing at IDRC. Because of staff turnover I found it difficult to maintain contact and to establish a rapport with new staff.

There were some regional differences in the types of persons with whom former project leaders maintained contact and in the purpose for this continued association:

- ASRO, LACRO: maintained contact primarily with fellow researchers and project co-workers for academic interchange and project-related work;
- EARO: sustained contact with fellow researchers, project co-workers, and government policymakers for academic interchange;
- MERO: continued contact with project co-workers, fellow researchers, and IDRC program staff for project-related work and personal and social reasons; and
- SARO, WARO: maintained contact with fellow researchers, IDRC program staff, and project co-workers primarily for project-related work.

Mohamed El-Fouly

Esmat S. Ezzat

Yousef A. Nusseir

In my first project, I had 10 people working under me who I had to supervise. It was the first time I had the responsibility to manage a research project, and deal with real-world problems. This experience is very useful now, because I have to manage 200 people.

I strengthened my people-management skills. I also learned to be more flexible. IDRC management was very flexible and it enabled me to be more creative.

Networking with colleagues from other countries broadened my perspective. Participating in conferences in different venues and discussing results was educational for me.

Before IDRC, my institution had absolutely no access to information. Now due to the establishment of the information centre in our organization... access to information has become easy.

Impact on Capacity Building

Introduction and Summary of Findings

To achieve "empowerment through knowledge" IDRC has used its resources to help create, maintain, and enhance research capacity in developing countries. Capacity building is viewed as a means to an end – one mechanism among a host of others that facilitates development. Although a corporate definition for capacity building does not exist, some commentators have borrowed from the area of educational research to conceptualize the Centre's efforts. One suggested definition is:

> Capacity building is more or less a systematic process of strengthening an individual's or an institution's ability to identify problems, assess needs, establish priorities for action, design and implement programs, and evaluate their effects ... Capacity building denotes the establishment of the human, technical and institutional foundations ... Capacity building seeks to develop a national pool of research abilities and skills and a critical mass of trained personnel.[6]

This definition suggests that capacity can be strengthened on at least two levels – that of the individual and that of the institution. By supporting researchers and enhancing

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6 Morales-Gomez and Shaeffer quoted in Dottridge, Tim. *Strengthening Research Capacity: The Experience of the International Development Research Centre*. Ottawa. IDRC. 1993.

their skills, the Centre also builds the capacity of the institutions to which they are attached.

This section assesses IDRC's impact on the researchers it has supported. The first part examines the impact reported by project leaders in three areas: skills; perceptions of development issues; and career advancement. The second part explores some capacity-building mechanisms and practices highlighted during the interviews.

The most direct effect of IDRC's support has been to strengthen the skills of researchers. This has led to enhancement of personal profiles and career advancement. IDRC's impact on the careers of researchers has come mostly through participation in IDRC-supported networks and networking activities (e.g., conferences). However, the older the project leader, the less impact IDRC-supported projects have had on strengthening certain skills. The main mechanisms for building capacity in the South have included experience in project management (learning by doing), participation in training sessions, and networking and collaboration with program staff.

Individual Capacity Building: Skills Acquired

Project leaders were asked to rate perceived improvements in a variety of skill areas. These skills were divided into four broad categories:

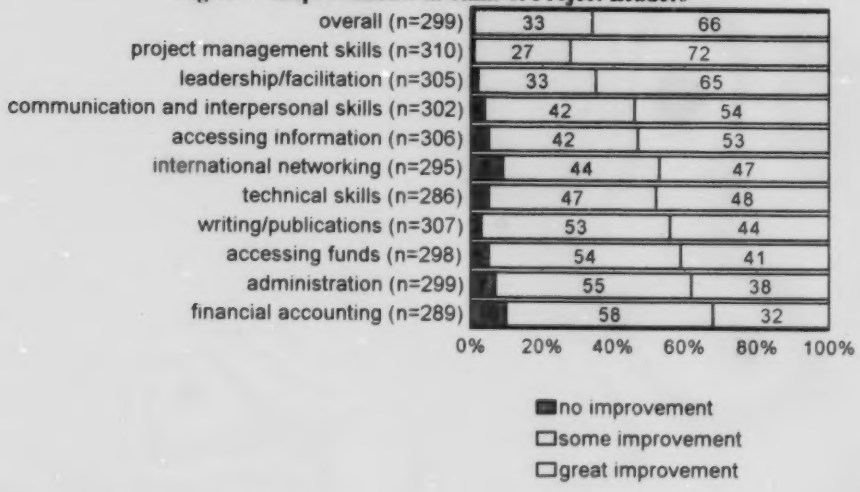
- project management skills – leadership, administration, and financial accounting;
- communication skills – oral and written;
- networking, and accessing information and funds; and
- technical skills.

For ease of analysis, each of these categories was examined separately. However, the categories are interrelated and a synergy exists between them. Therefore, an improvement in one skill group is likely to have an impact in other areas. For example, many researchers were enthusiastic about the communication skills they acquired working on IDRC projects. Some also noted that these skills improved their capacity to network and access funds.

Frequencies

Respondents rated the impact that project work had had on eleven skills using a scale of 1–7. Their answers were grouped into three categories: "no improvement" (1–2); "some improvement" (3–5); and "great improvement" (6–7). A large proportion of project leaders reported "some improvement" or "great improvement." For every skill type, at least 90% of the respondents felt that their work on IDRC-funded projects had enhanced their capacity to some degree (Figure 7).

Figure 7: Improvements in Skills of Project Leaders



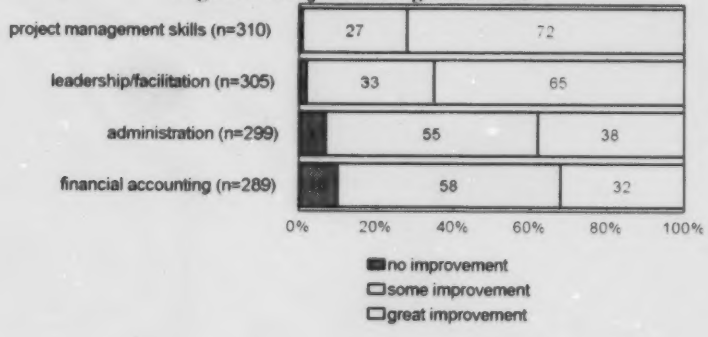
Overall Skills Improvement

Analysis of the questionnaire data suggested that project leaders perceived IDRC project work to have played a significant role in developing their "overall" professional skills. Thirty-three percent of respondents reported that their association with IDRC had led to "some improvement" in these skills; and two in three claimed that their "overall" professional skills were greatly improved.

Project Management Skills

Project leaders were asked to rank the impact of IDRC projects on their skills in project management, leadership, administration, and financial accounting. Almost three quarters (72%) reported that their overall skills in project management were greatly improved, and 65% felt that their leadership and facilitation skills had been greatly improved. Fewer respondents reported "great improvement" in skills in administration (38%) and financial accounting (32%); whereas, the majority replied that there had been "some improvement" (Figure 8).

Figure 8: Project Management Skills



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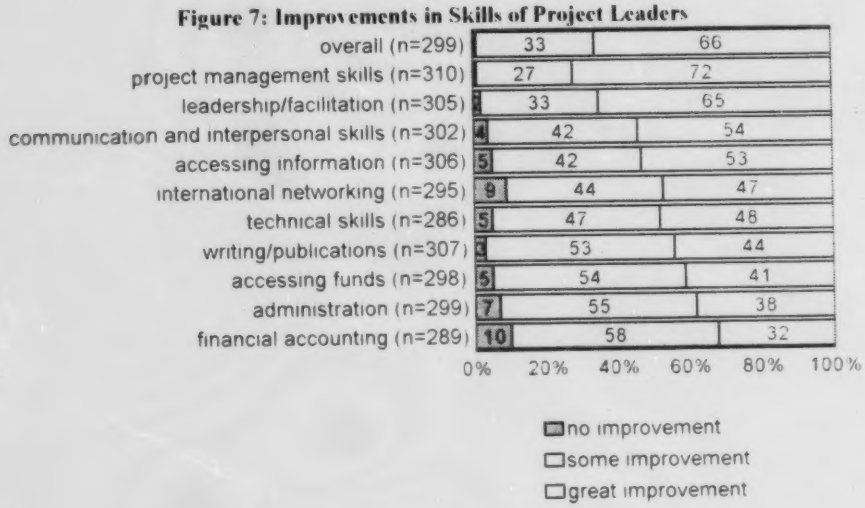
overall (n=299) 33 66
project management skills (n=310) 27 72
leadership/facilitation (n=305) 33 65
communication and interpersonal skills (n=302) 4 42 54
accessing information (n=306) 5 42 53
international networking (n=295) 9 44 47
technical skills (n=286) 5 47 48
writing/publications (n=307) 53 44
accessing funds (n=298) 5 54 41
administration (n=299) 7 55 38
financial accounting (n=289) 10 58 32
0% 20% 40% 60% 80% 100%
no improvement
some improvement
great improvement

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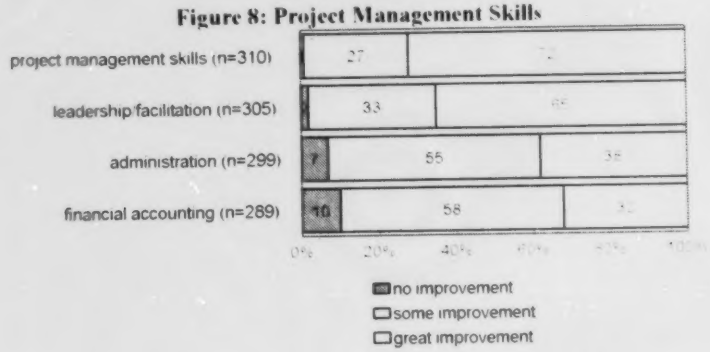


Interview responses reinforced the project leaders' emphasis on the development of skills in project management that were reflected in the questionnaire results. Many commented that their work with IDRC had generally improved these skills and enabled them to manage projects and people "more effectively and efficiently." Their role as project leader had also placed many in an unfamiliar and challenging position as leader of a research team. They had to learn to "manage, monitor, and motivate" – skills that were honed through on-the-job experience. For many, this experience proved useful in their subsequent work. Respondents also reported that they had gained valuable experience in financial and administrative management. Other related skills mentioned by interviewees but not identified in the questionnaire were: time management; project design; monitoring; results-based management; and the ability to work in a team.

I learned how to maintain accurate and complete financial records.

The project gave me practical experience in coordinating inter-organizational cooperation.

I learned how to manage a project (monitoring, accounting, etc.). I also learned more efficient working methods that I am using today.

Verbal and Written Communication Skills

Fifty-four percent of the respondents reported "great improved" in their communication and interpersonal skills, and 42% reported "some improvement." Only two other skills (project management and leadership/facilitation) received a higher ranking. Forty-four percent of project leaders reported "great improvement" in their writing skills, and 53% felt there had been "some improvement."

I gained the skills to become an editor and am now publishing a magazine to demonstrate my project's findings.

I grew to be more precise in writing up research results.

I learned how to publish papers in English.

Analysis of the interview data suggested that the communications skills of project leaders were developed and strengthened as a result of their participation in project-related activities. For example, IDRC's requirement that project leaders submit written technical and progress reports forced many to learn to write reports to an international standard. One project leader noted that collaborative work on a report with a Canadian partner was of particular benefit because the drafting and editing process helped develop his skills. Verbal communication skills were enhanced by presenting papers and research findings at conferences.

Networking and Accessing Information and Funds

A large proportion of project leaders reported "great improvement" or "some improvement" in their ability to access information (53% and 42%, respectively), to network (47% and 44%), and to gain access to funds (41% and 54%). Many

interviewees emphasized the valuable contacts they had developed at IDRC-sponsored conferences and workshops and as a result of their project work. This formal or informal networking benefited researchers because, in their words, it gave them the opportunity to work with top-caliber scientists and thus "opened new avenues for cooperation," exposed them "to new ideas through collaboration," and broadened their "knowledge of other research in the same area." Others noted that project work gave them the opportunity to contact, work with, and advise government officials and policymakers.

Project leaders reported that their capacity to access information and funds also improved. Their association with IDRC had enhanced opportunities to network with professionals in other funding organizations and to develop new contacts and channels of communication for access to information and funds. Several project leaders also suggested that the skills and experience they had gained writing IDRC proposals and reports had served them well when they developed funding proposals for other organizations.

> *(From my project experience) I met the best scholars in the relevant fields and learned how to identify and contact those I did not already know.*
>
> *Definitely the most significant experience was to meet the group of colleagues from other countries and to compare our research outcomes with theirs on the informal urban sector in Colombia.*
>
> *The project made it possible to exchange documents and seminar reports with colleagues on the subject of information retrieval. I have learned a lot in this field and was able to improve the courses I give on this subject.*
>
> *I have become more effective and efficient in accessing funds. This is an important skill because our organization requires outside funding to keep going.*

Technical Skills

Forty-eight percent of the respondents reported "great improvement" in their technical skills and another 47% reported "some improvement." Although a significant number of respondents improved their technical skills, interviewees placed less relative importance on this aspect of skill development. The interviews revealed that, in many cases, project leaders felt that their technical and research skills had already been well developed; participation in an IDRC project had played a greater role in honing other skills they lacked, notably project management and communication.

Regional Differences

The majority of respondents from all six regions indicated that their "overall" skills had undergone "great improvement" as a result of their work on IDRC-funded projects. The ranking of specific skills considered most improved varied by region:

- LACRO: project management and capacity to access funds and information;
- SARO: networking and project management;
- MERO: communication and access to funds and information; and
- ASRO, WARO, and EARO: project management.

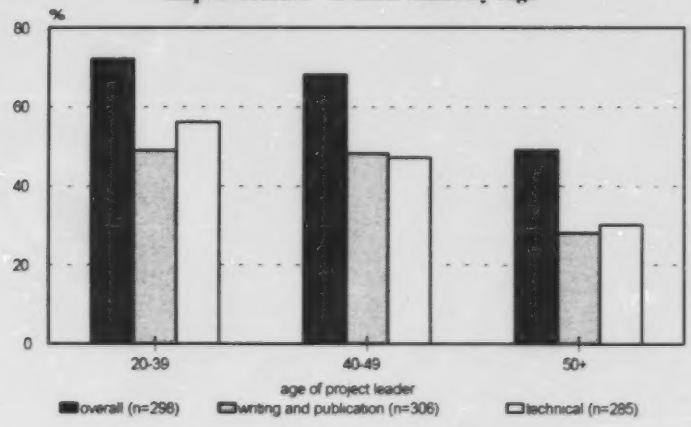
The degree to which specific skills were reported to have improved also varied by region. There were significant differences for four skills: financial accounting; communication; networking; and leadership and facilitation. Generally, LACRO project leaders reported the least improvement:

- LACRO respondents reported less improvement in their accounting skills than did respondents from ASRO WARO, and EARO.
- Networking skills varied between regions; in particular, LACRO project leaders indicated less improvement in these skills than respondents from SARO.
- In leadership and facilitation skills, LACRO registered less improvement than MERO.

Skill Improvement by Age and Level of Experience

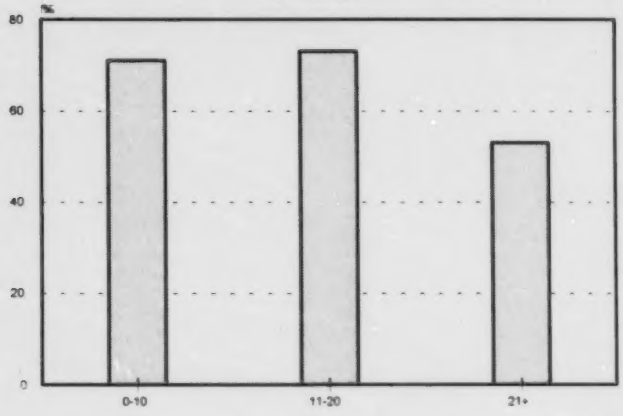
As the age of first-time project leaders increased, the proportion that reported "great improvement" in "overall," "writing and publication," and "technical" skills declined (Figure 9). These variations were statistically significant and suggest that, all other things being equal, the older the project leader, the smaller the potential impact IDRC will have on building capacity in these specific skills.

Figure 9: Percentage of Respondents who Reported "Great Improvements" in their Skills by Age



Not surprisingly, a similar inverse relationship was found to exist between project-leader experience and "overall" skill improvement: the greater the level of experience that project leaders possessed when they first started working on IDRC-funded projects, the smaller the proportion who reported "great improvement" to their "overall" skills (Figure 10).

Figure 10: Percentage of Respondents who Reported "Great Improvements" in their Skills by Level of Experience (n=291)



A general improvement in "overall," "financial accounting," and "administrative" skills was recorded for project leaders post-1980. This increase may have resulted from the introduction of stricter IDRC reporting requirements. Improvements in capacity also varied according to the number of projects on which project leaders had worked. Project leaders who worked on more than one project generally reported greater improvement in their skills.

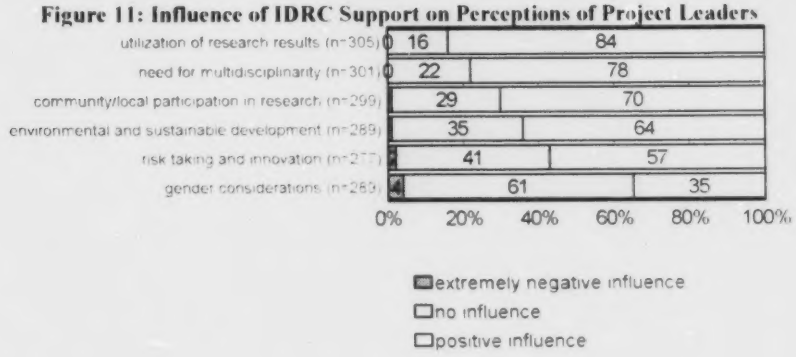
Influence on Research Approaches

To gauge the success or failure of IDRC to promote new research approaches, project leaders were asked to rank IDRC's influence on their perceptions about: utilization of research results; interdisciplinary research; community or local participation in research; environmental and sustainable development; risk taking and innovation; and gender considerations. This section reviews and analyzes the quantitative and qualitative data for each of these categories.

Frequencies

Respondents rated the impact of their project on their perceptions of six issues using a scale of 1–7. Their answers were grouped into three categories: "extremely negative influence" (1–2); "no influence" (3–5); and "positive influence" (6–7). The majority of project leaders reported that IDRC had had a positive influence in all the areas they were queried on except for gender considerations (Figure 11).

Figure 11: Influence of IDRC Support on Perceptions of Project Leaders



Utilization of Research Results

Almost 85% of respondents reported that IDRC had positively influenced their perceptions of the need to use research results. Many of the interviewees indicated that, by having a utilization component built into their projects, they were able to witness for the first time how individuals and communities benefited from the application of research findings and, therefore, learned how research utilization was linked to project success.

The research results were widely used and individuals directly benefited. I, therefore, saw the importance of research utilization.

I learned the importance of dissemination and how to link it with policymaking by presenting results to international meetings.

I used the research results in the project's second phase and realized that this was central to a project's success.

Multidisciplinary Research

IDRC has made significant inroads in influencing project leaders' awareness of interdisciplinary research. Seventy-eight percent of all respondents indicated that being a project leader had positively influenced their perception of the need for interdisciplinarity. During the interviews, many of the project leaders stated that, by working with researchers from different disciplines, they had become aware of "the importance of synergy between various disciplines for a broader perspective" and thus learned to appreciate the need for, and the advantages of, using a multidisciplinary research team in their projects. The broader, integrated perspective gained through multidisciplinary study was viewed by some as a means of achieving "more applicable results." A number of interviewees also remarked that their work with specific disciplines had convinced them of the value of their integration into the project team. For example, an ASRO project leader

The informal sector work involved a wide range of sectors (lawyers, economists, educators, etc.). We all had to take each other's views into account to understand the problem. IDRC made this opportunity possible.

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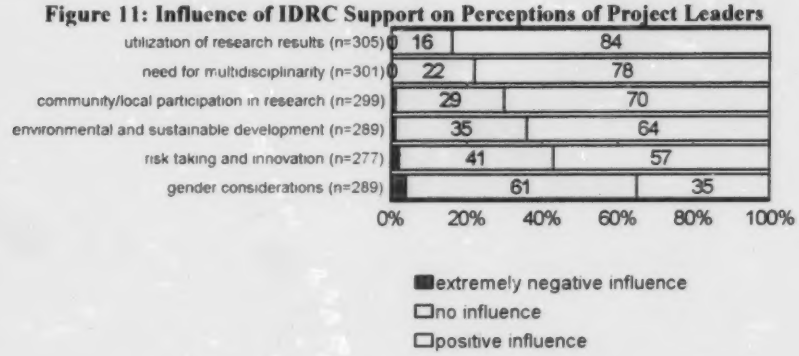

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commented that he learned to appreciate the skills of sociologists after working with one on an IDRC-funded project: "I was surprised to watch them and see how they learned a lot of information by talking to villagers."

While I was working on the project, I was able to feel the importance of the interactions between researchers of various disciplines. This has given me a deeper understanding of environment-related issues.

Community or Local Participation

IDRC has long recognized and emphasized the need for a participatory approach in research. Seventy percent of project leaders indicated in the questionnaire that their affiliation with IDRC had positively influenced their perceptions of community or local participation. In interviews, some project leaders admitted that they had been sceptical at first "that they could get useful information" from the community. But, their involvement with IDRC-funded projects had helped them realize the value of community input to define research problems and arrive at workable solutions. It was also evident that IDRC project work had given the project leaders an opportunity to work at the community level, something they could not usually do as academics.

From the beginning, users and peasants were involved. It is mainly the peasants, who know the practical application of a machine, who were responsible for a lot to the progress made in the project. This made me realize how important their participation was.

Environment and Sustainable Development

Close to two-thirds of questionnaire respondents indicated that their involvement with IDRC had greatly influenced their perceptions of the environment and sustainable development. The few who expanded on their answer during the interviews noted that participation in IDRC projects had raised their knowledge and awareness of the interconnections between the environment and sustainable development.

I started to realize the atrocities of pollution. The local industrial plant was surrounded by residential neighbourhoods and I saw the negative consequences this could have on health.

Risk Taking and Innovation

More than half of the respondents noted a positive influence on risk taking and innovation, although only a few of the project leaders interviewed volunteered comments. The low response rate points to a limitation or weakness in the survey instrument because many interviewees admitted that they did not understand the concept and, therefore, could not answer the question. When project leaders did comment, they suggested that the flexibility of IDRC's approach allowed for their own ideas and concepts to emerge. For one project leader, the IDRC project showed him the benefits of taking risks and this experience encouraged him to set up his own business.

Responses to the questionnaires show that IDRC has had a greater influence on perceptions of "risk taking and innovation" among respondents from MERO and EARO and less influence on respondents from SARO. There were no other statistically significant regional differences.

Gender Considerations

Questionnaire responses indicated that project leaders felt that IDRC had had the least influence on their perceptions of gender; only 35% reported that their involvement with IDRC had positively influenced them to any degree. Four percent of respondents also reported that IDRC had had an "extremely negative influence" on their perceptions of this subject (though no elaboration was provided).

Although IDRC's influence on perceptions of gender was not as pervasive as in other areas, it nonetheless did have some positive impacts. By definition, issues of gender relate to both women and men. However, comments recorded during the interviews referred to researchers' perceptions of women only. Modification of perceptions occurred on three distinct levels: attitudes toward women in general; attitudes toward female researchers; and attitudes toward female beneficiaries.

Some project leaders admitted that before working with IDRC they considered women as "second class" citizens. However, through their participation in IDRC-funded projects they learned to understand and thereby empathize with women and, as a result, "treated them as equals." Others noted that, because the research teams were composed of women and men, they became "more aware and sensitive" to gender issues and learned that female researchers were as capable as their male counterparts. Some project leaders commented on the need to take the opinions of female beneficiaries into account during project design and implementation.

Before the research project, I thought of women as "second class citizens." But while looking into fertility issues, I began to read books on feminism and had to admit I was biased and discriminatory. I now treat women as partners and equals. My daughters and my sons are treated the same. The study showed me that women really don't want so many children but pressure from their mothers and elders plus traditional beliefs force them to have more children than they really want. In fact, this new awareness was one of the reasons why I volunteered to speak to the women's groups about the findings of my research.

I think IDRC has been sensitive to gender issues and has specifically paid attention to women's concerns to the extent of mounting research grant competitions on "women in development" themes and giving "special consideration" to female research applicants.

This is a big social issue that involves not only value concepts and cultural ethics but traditional social systems and norms as well. What is conceived as good and ethical in the West may not be applicable here. Those who work in this area should have background training in social anthropology. Otherwise, you may be accused of being a cultural imperialist!

There were many favourable comments from the interviews on how well IDRC had been able to deal with the gender issue. Most project leaders interviewed were sympathetic to gender differences in research activities and encouraged IDRC to continue its initiatives in support of gender equity. However, some project leaders expressed the view that IDRC had taken too strong a stand on gender, to the point of impairing project implementation. Others suggested IDRC should be more cautious in promoting gender equity, avoiding "antagonizing" male researchers or "alienating" policymakers. A few warned of making equity measures culturally appropriate.

In summary, prior to their participation in IDRC-funded projects, the level of awareness of issues and concepts such as interdisciplinary research and sustainable development varied considerably among project leaders. Many of the researchers knew about these concepts before their association with IDRC, but it was their project experience that reinforced, shaped, and applied their understanding. Participation in IDRC projects provided the opportunity to field-test these research methods. Similarly, some of the researchers had been oblivious to such concepts as community and local participation and gender sensitivity prior to their involvement with IDRC. For example, one EARO researcher noted that he had previously used "top-down" research methods with little or no participation from the beneficiaries; his work with IDRC introduced him to a participatory approach, which he has now adopted as a standard research method.

In the past, I sent students to collect data in the field. Now I visit the intended beneficiaries to gain insight.

I have used an interdisciplinary approach on successive projects. I bring in engineers, sociologist, and economists as needed.

I learned to include matters of waste disposal and sanitation as factors in health promotion.

I learned that it is important to integrate women in water management projects as they are the ones getting the water. The project with IDRC influenced my views on interdisciplinarity and community and local participation. I was allowed to put these things into practice.

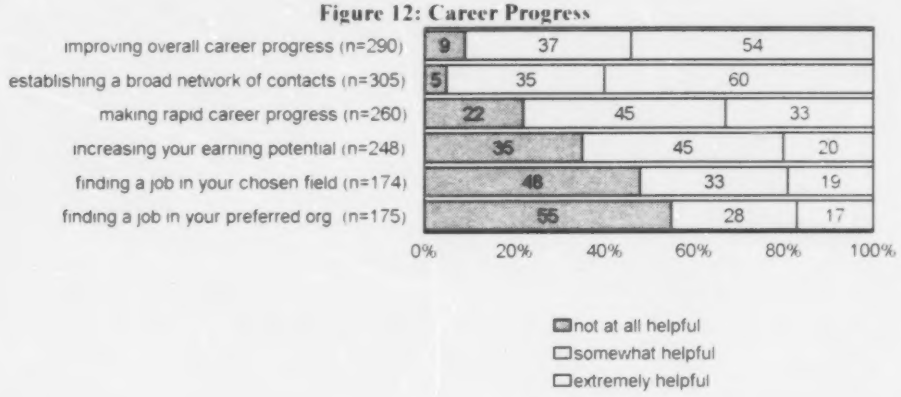
Career Progress

IDRC's support helped advance the careers of project leaders. From the viewpoint of project leaders, involvement with IDRC influenced their career path primarily by strengthening their professional skills or enhancing their professional profile. Taken together, these two effects have contributed to continued employment and subsequent promotions.

Frequencies

Respondents were asked to rate the impact project work had had on six career-related activities using a scale of 1–7. Their answers were grouped into three categories: "not at all helpful" (1–2), "somewhat helpful" (3–5), and "extremely helpful" (6–7). The majority of project leaders perceived work on IDRC-funded projects as having been "extremely helpful" in "establishing a broad network of contacts" (60%) and in "improving overall career progress" (54%). The other four categories received substantially less endorsement (Figure 12).

Figure 12: Career Progress



Networking

Respondents rated networking as the most valuable outcome of IDRC project work for advancing their careers. During interviews, project leaders remarked that this work had enabled them to establish a broad network of contacts locally, regionally, nationally, and internationally. As a result, they also began to work at these levels. Several project leaders felt that these contacts were significant because they increased the profile of both themselves and their institutions.

Improving Overall Career Progress

Working with an internationally known institution such as IDRC was perceived by interviewees as a benefit because it gave them prestige and credibility and enhanced their profile. Many expressed the belief that they had received promotions and positions with greater responsibility as a result of their project work with IDRC. By successfully completing work with IDRC, project leaders felt that they had taken a

step toward proving themselves to their managers and peers. One project leader noted that he had been able to demonstrate that he "could produce tangible research results" and for this reason he was rewarded with subsequent promotions, including to his present position as Director. Above all, project leaders emphasized that the most beneficial aspect of their involvement with IDRC had been the confidence they had developed in themselves as researchers.

Rapid Career Progress

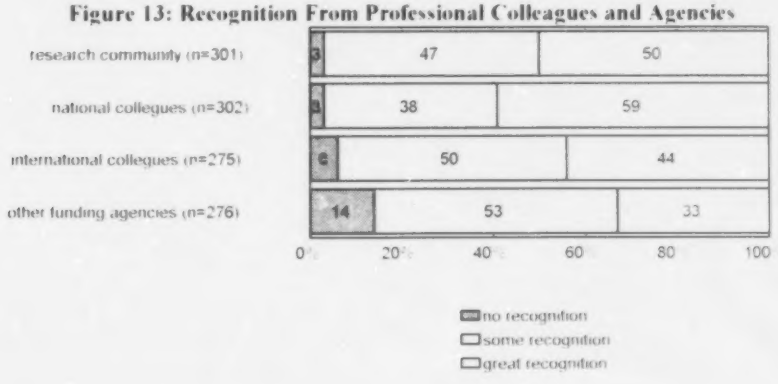
One-third of the respondents reported that their association with IDRC had led to rapid career progress. Interviewees who commented on this aspect of career development tended to have been affiliated with IDRC early in their career. For example, one project leader indicated that the IDRC project was the first major project he was involved with following graduation. It taught him to be a better research manager and it enhanced his reputation. He believed that it contributed indirectly to his promotion to Associate Professor and eventually to Department Head.

> *"...being involved in an IDRC-supported project did influence my career path. It gave me more familiarity with international institutions and how they work. The project was the gate for me to pursue this line of work and maintain the skills to network internationally. Through networking, I improved my department's image internationally. Every time I convened a meeting with foreign colleagues it was easier because I was known to them because of my work with IDRC".*

Enhanced Profile and Reputation

Fifty percent of the respondents indicated that their role as project leaders had enhanced their profile and reputation within the national and international research community (Figure 13). The main reason given for heightened recognition was their affiliation with an international organization. One project leader noted that her involvement with IDRC had raised her profile both nationally and internationally. Because she was working with an international group, the projects were considered credible and were recognized by others in the field.

Figure 13: Recognition From Professional Colleagues and Agencies



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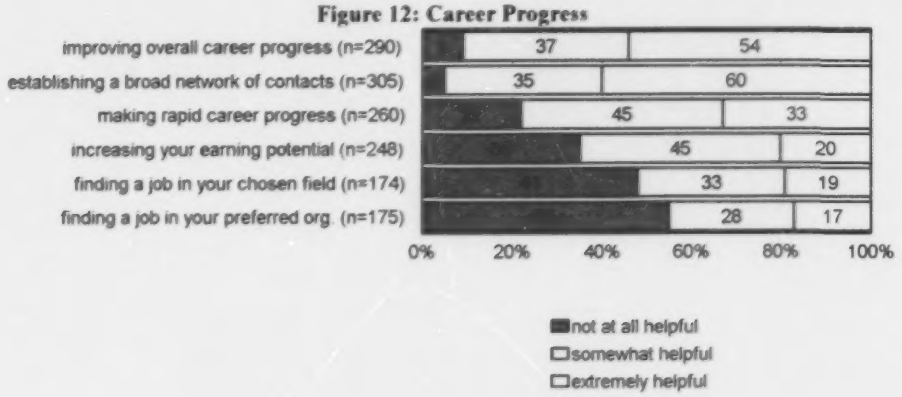

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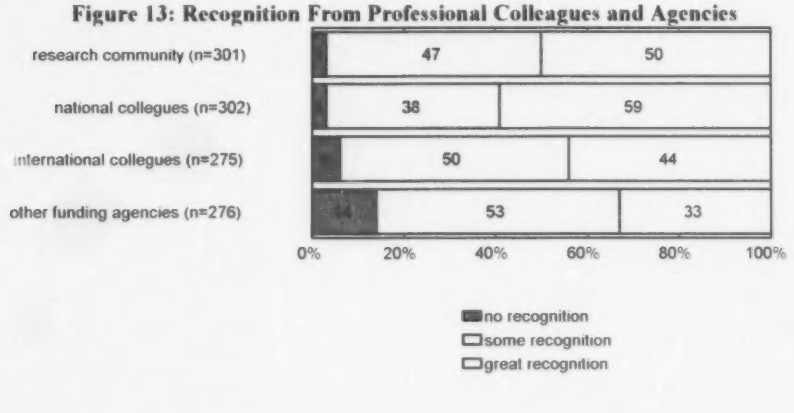


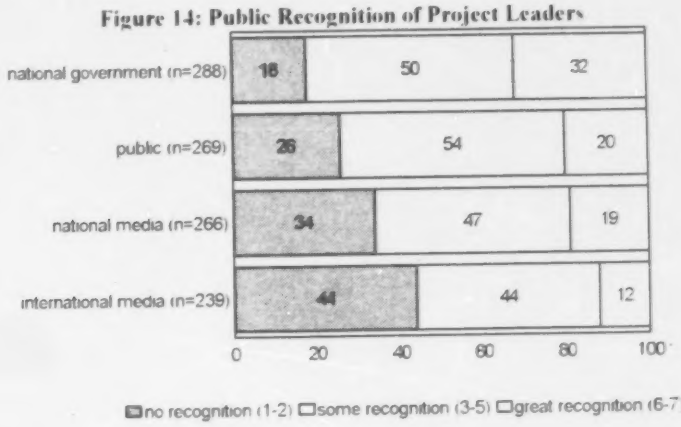
For many researchers, increases in profile and reputation were translated into an enhanced capacity to seek and receive funding. Thirty-three percent of respondents indicated that their IDRC-supported work had helped them gain recognition from other funding agencies.

The project built confidence in me to start my own consultancy and work in development in my own country.

By giving me a higher profile within the department and by increasing my professional skills, the IDRC project enabled me to obtain funds from another organization for my project.

Project leaders were also asked to rate the extent to which their work on IDRC projects had raised their public profile with the national government, the general public, and the media. The majority gained some or great recognition from these groups (Figure 14).

Figure 14: Public Recognition of Project Leaders



Innovations

Many projects have as one of their objectives the improvement or creation of new or improved technologies, research tools, or methods. Seventy-two percent of respondents believed that the development of such an innovation during their IDRC-supported project had had a positive impact on their career. The interviewees suggested that, because the innovation was a tangible result, it had helped increase their profile and, invariably, advanced their career.

Publications, Awards, and Community Action

Career development can be assessed by examining the number of books, reports, and articles published and awards received. Virtually all of the project leaders had produced publications, and more than 40% of the interviewees noted that some of these publications were either directly or indirectly related to their work with IDRC. One project leader indicated that his most significant publications, which incorporated results from an IDRC project, continue to be used as a standard reference for students, researchers, and teachers. Another project leader reported that

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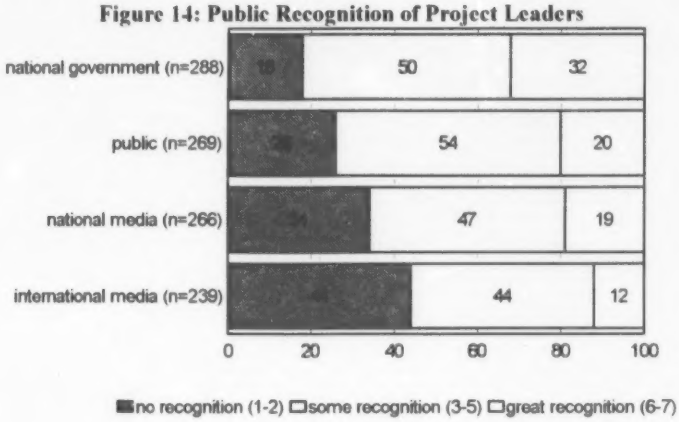

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the book produced from his IDRC project experience received comments that it "changed things nationally!"

Thirty-eight percent of the project leaders had won at least one scientific or professional award. Their accomplishments in community service, research, publication, and development had been recognized by local, national, and international committees. Although only a few of those interviewed indicated that the awards had been received directly as a result of their participation in an IDRC project, project leaders commented on the cumulative aspect of being IDRC recipients. The IDRC project was a component of their professional career that had enhanced their reputation and stature and indirectly contributed to their award.

Career Obstacles

A broad range of issues was raised with respect to obstacles encountered by project leaders during their careers. The main problems related to financial constraints, the political situation in their country, institutional politics, and their own lack of confidence. IDRC support helped project leaders overcome some of these obstacles.

Financial constraints on their ability to conduct research were emphasized by several interviewees as an impediment to career development. Although IDRC support is not a long-term solution, project leaders noted that it had enabled them to increase their contacts, develop their skills, and enhance their profile, all of which had helped them leverage other funds.

One of the most interesting issues was the strong influence politics or the country's political situation had had on career development. Several project leaders noted that IDRC support had enabled them to remain in a specific region or country instead of leaving because of funding or political constraints. For example, in LACRO and EARO, military dictatorships and civil war had restricted research in some countries. Some project leaders noted that IDRC support during these difficult periods had helped them survive and maintain or regain their expertise in their field of research.

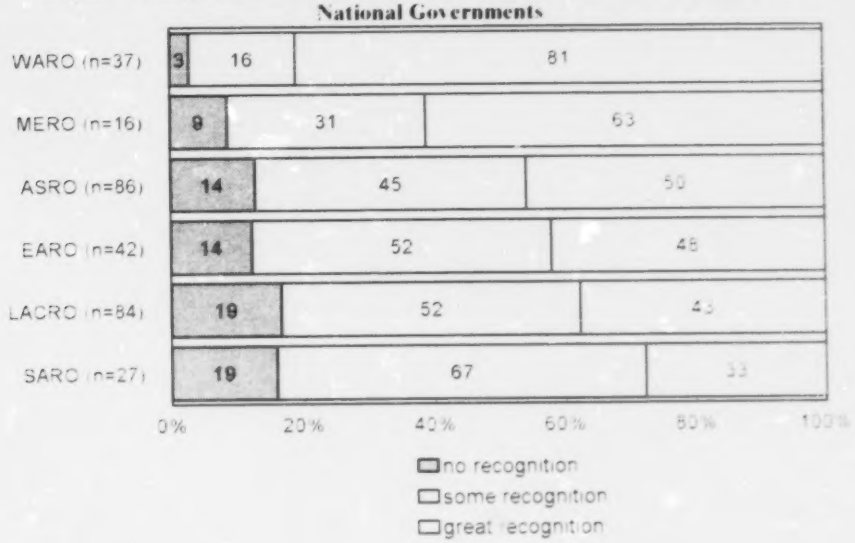
Other situations such as institutional politics, limited management positions for promotion, and staff shortages that prevented individuals from pursuing further studies were also raised as obstacles to career development. With IDRC support, some project leaders reported that they had overcome these obstacles.

Regional Differences

There were significant variations between regions with respect to recognition by the research community, national colleagues, and the national government. Eighty-one percent of respondents from the WARO region, compared with only 33% of the respondents from SARO, indicated that they had received great recognition from the research community (Figure 15). Respondents from LACRO reported gaining the

least recognition from their national colleagues and national government in comparison with the other regions.

Figure 15: Regional Differences in Recognition by Research Community and National Governments



Little variation was found between regions with regard to IDRC's influence on specific aspects of the careers of respondents. Establishing a broad network was rated the highest by the greatest percentage of respondents in every region. There were, however, significant variations between regions with respect to IDRC's impact on making rapid career progress. Respondents from EARO and WARO reported that their affiliation with IDRC had been extremely helpful in making rapid career progress. Fewer respondents from LACRO and SARO found this to be the case.

Mechanisms for Capacity Building

Feedback from project leaders suggested that capacity building was realized through four main mechanisms: empowerment of Southern researchers through on-the-job work experience, staff training activities, technical linkages and networking, and interactions with program staff.

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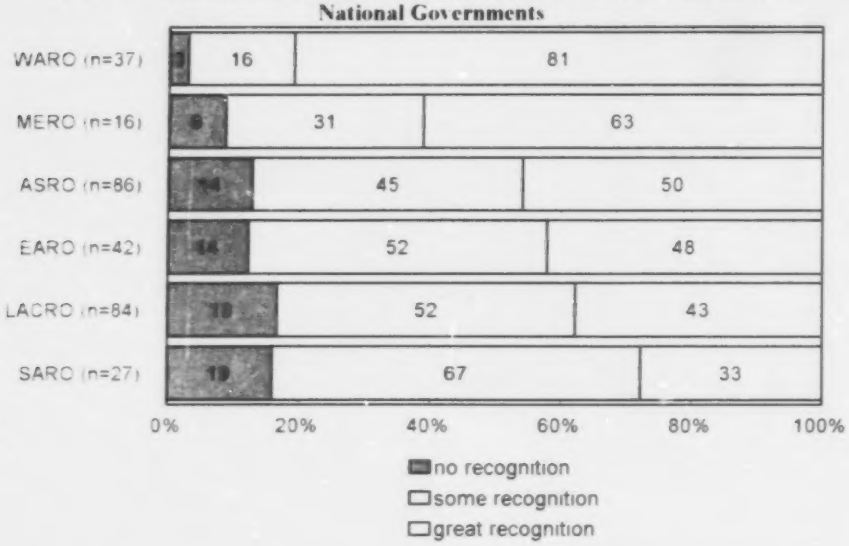

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Empowerment of Southern Researchers

The interviews gave strong endorsement to the IDRC approach of giving Southern researchers control over their own research. The opportunity to assume independent responsibility and leadership of a project afforded by IDRC's style of support was singled out more than any other as being an important impetus for capacity building.

If IDRC projects succeed, it is because IDRC trusts national researchers. If a Canadian expert had been sent to manage the project, he would not have succeeded. IDRC should keep on working exactly as it has done until now because it produces results and allows Southern researchers to gain confidence.

Interviewees suggested that, at the broadest level, researchers were influenced simply by being exposed to, and working with, new concepts and ideas during the everyday implementation of their projects. Capacity building through on-the-job training fell into three categories: ability and confidence to take on more responsibility; skills in research management; and new ways of thinking about research. Interviewees gave roughly equal weight to these three categories. For example, in terms of new ideas, researchers found that by working with villagers, they had learned to value the opinions of the villagers and to incorporate their input into project objectives. Interviewees encouraged IDRC to continue and to strengthen this approach by involving Southern researchers and beneficiary communities in the definition of strategies, programs, and individual projects. Several project leaders commented on the gains to be made by taking more interest in the dissemination and application of research results. One researcher praised *IDRC Reports* for raising his awareness and knowledge of environmental issues.

IDRC likes you to shine on your own. IDRC shows you how to swim and lets you go – it's up to you to sink or swim.

The opportunity to design, write, follow through, and complete a project was the most valuable aspect of being involved in an IDRC-supported project... It is hard to get this kind of independent responsibility in the context of my university.

Staff Training

Informal training of staff in both technical and research-support areas, primarily research management and information technologies, was the most frequently mentioned means of strengthening research capacity. Many IDRC-supported projects include training components. Skills were gained by, among other things, attending conferences and workshops, obtaining degrees, or attending training courses that included communications (writing reports and proposals), financial management, and technical skills. There was much positive feedback regarding the value of the courses offered, and those who had attended personally usually commented on their

I was a resource person at a communications course, but I actually learned more on how to write.

An IDRC seminar on how to manage project funds was very useful.

I completed training sessions on computer modelling in Québec that increased my research skills, especially in data processing.

usefulness. One project leader indicated that, as a result of a project-management course he had attended at which participants discussed problems with IDRC's accounts process, IDRC had actually made some important changes. As such, the courses can be viewed not only as a form of capacity building for the project leaders, but also as a mechanism for feedback to IDRC.

Technical Linkages and Networking

Computer connections and collegial exchanges through mail, workshops, and meetings were important for exchanging technical information, identifying potential partners, and disseminating research results. "South–South" and "international" formal and informal linkages between researchers and with potential clients or research users were reported as extremely beneficial to capacity building.

The project enabled me to increase contacts.

Being involved in a network project enabled me to meet fellow researchers in different fields working on the same topic. This broadens one's perspective...

Networking with other project leaders and with IDRC staff was extremely positive. This is opening new avenues for cooperation between our agency and other institutions...

Many interviewees suggested that networking was an important method for learning about and exploring issues. For example, attendance at conferences had exposed one project leader to issues of environmentally sustainable development. Another reported that exchanges during workshops and his work with a female research advisor had reinforced his belief that women have a strong role to play in research.

Interaction with Program Staff

A few of the researchers commented that both they and their institution had been influenced greatly by their interactions with IDRC program staff. Program staff influenced research methods and procedures and advised on new developmental concepts. One project leader from LACRO, for example, remarked that program staff had suggested new paradigms that were used in his study of technology and its effects on changes in employment levels and patterns.

A number of interviewees reported that they had had no choice but to learn new approaches to development because they had been incorporated into the project's design by IDRC staff. An ASRO project leader reported that IDRC staff had insisted that an agriculturist and a sociologist be used to transfer results of the rice program to the intended beneficiaries. He noted that they had had a lot of problems in the beginning, but eventually this approach had proven helpful. Similarly, another ASRO researcher mentioned that IDRC had stressed community involvement in technology transfer and fieldwork and that he had found this useful in meeting the project's objectives.

Mohamed Karama

Deogratias Sekimpi

Ester Zulberti

I influenced policymaking with respect to rural education. My study was the first ever on schools in rural areas and the findings were shocking. I was invited to present my results at the Ministry of Education and to participate in a large teacher training program.

Every year the number of persons treated in the villages is increasing. Those who had refused at first are now asking for treatment after seeing that their neighbours were cured.

We found that among the poor many people felt that they had nothing to do with local or national politics. The approach we developed liberated them to choose from a wider range of alternatives to solve problems. It gave them the feeling that their concerns and ideas are taken into account.

Other Contributions to Development

Introduction and Summary of Findings

Project funding and capacity building are not ends in themselves, but are the means by which IDRC attempts to assist those seeking change in the South. In this era of budget-cutting and deficit reduction in Canada, the need to demonstrate the value of the Centre's work in terms of results is obvious. However, measuring IDRC's contribution to development is no simple matter. Time is one factor that hinders analysis: many of the research results (e.g., technological innovations, findings, and recommendations) that flow from IDRC-funded projects may only be available in the market place or enacted as policy long after the project files have been closed. The collective memory of project leaders can be used to get a sense of their perceptions of the extent to which IDRC-supported research has contributed to development. Survey and interview questions sought to explore contributions that had been made to policy formulation and the development of technological and methodological innovations as well as any discernible impacts on intended beneficiaries.

About one-third of project leaders who responded to the questionnaire felt that they had influenced policy to some degree. Interviewees suggested that this policy impact had been achieved either directly as a result of the project or indirectly as project leaders used skills developed during their association with IDRC to inform policy. In the view of project leaders, IDRC support has in some cases directly benefited beneficiaries. However, they suggested that IDRC could be more effective if it provided additional follow-up support to facilitate the application of research findings.

Contributions to Policy

One important audience for research results flowing from IDRC projects is government policymakers. IDRC-supported projects have often been aimed at enhancing the ability of policymakers to formulate policy and implement legislation that would affect the direction of their country's development. Project success may, therefore, often rest on the exposure of project results to policymakers and the ability of project leaders to communicate the importance of their research findings. In the interviews with project leaders, two main types of impact on policy were identified: impact from project results; and impact due to increased capacity at the individual and institutional levels.

Impact from Project Results

Thirty-two percent of project leaders who responded to the questionnaire indicated that their IDRC-supported project had led to the development of new policy. During the interviews, approximately 60% of the project leaders reported that their project work had influenced policy to some degree. The language used by some researchers to describe the adoption of research results suggests how IDRC projects have influenced policymaking: research results were said to have increased policymakers' "awareness of the issues," to have "demonstrated" the usefulness of different courses of action, or to have "reassured" them of the benefits of a particular technological innovation. From the interview responses, the utilization of research results by policymakers included: specific practices that were implemented or that improved actual policy; and research results that helped inform policy discussion around a specific issue but did not necessarily lead to formal policy changes.

> *The project increased the government's awareness and recognition of bamboo and rattan as a national priority area for research. It is expected to have a long-term impact on the country's export earnings.*
>
> *Bamboo and rattan are now the two major crops being given priority by the government, especially in terms of smallholder production (10 hectares or less).*
>
> *The most valuable contribution to national development that IDRC support enabled me to make were policy changes. For example, polyclinics in Montevideo for the very poor had no gynaecologist. I made recommendations, and one week later, there was one assigned.*
>
> *The project is expected to have some impact on policy – it helped me provide better information to the government and thus to contribute to decision-making.*
>
> *...provision of better information in the development process...is leading to better utilization of resources.*

Impact due to Increased Capacity

Project leaders reported that they had gained new insights into concepts of interdisciplinarity and community participation. It is not clear if these capacity-building efforts have had a long-term development impact, but a few of the responses offered during the interviews provided some interesting glimpses into the longer-term impact of IDRC on the subsequent careers of project leaders and the roles they had played in development.

A number of project leaders indicated that their work with IDRC had enabled them to become experts in their field of study and thereby go on to influence policy. One reported that involvement with IDRC had given her the opportunity to conduct applied research on water-quality management at the district and community level. She attributed her present status as a "national expert" on water quality in part to her involvement with IDRC. In this role, she now works at the national level to advise the government on various aspects of its environmental policy, and she has contributed to the formulation of national standards for water quality that she expects will be enacted into law. Another researcher explained that his work had influenced the forestry sector and, because of the support he received from IDRC, he had been able to convince the government of the importance of this sector and thereby influence policy. After the project was completed, he had been retained by the government to advise them on forestry policy. According to him, many of the recommendations he had contributed during his advisory role had been implemented into policy.

For some, the impact on their capacity to influence policy was less direct. One project leader noted that because of his work with IDRC people seemed to have more trust in his abilities. As a result, he had been asked to evaluate government projects. As well, IDRC projects were often the catalyst for contacts between researchers and government policymakers that had been used to influence the direction of future policy. As a variation on this theme, one project leader reported that members of the research community sometimes joined the government as technocrats, which created a community of those who stayed with research and those who joined the government. Others had gone on to hold positions of power in NGOs. In this way, linkages were forged between the government and the research community.

Project leaders also recognized that IDRC-support for institutional development had had an impact on policy. Some project leaders indicated that continued support, or support geared toward institutional capacity building, had resulted in the recognition of the institution as an information source to government. One project leader reported that IDRC support had led to the creation of a centre of excellence in environmental research. As a result, the country no longer needed to rely on foreigners to assess environmental conditions or to provide training on how to carry out environmental impact assessments. Another project leader acknowledged IDRC's role in

establishing a National Information Centre where resources were made available to policymakers.

New or Innovative Technologies or Research Methods

Nearly all project leaders (97%) reported that their project work had resulted in the development of at least one technological or methodological innovation (Table 11). A large proportion of these innovations related to new methods of approaching or doing research. Many of the project leaders noted that, with the development of these innovations, the research community had strengthened its capacity and the capacity of research institutions to better tackle applied research. For example, one researcher reported that he had been able to develop a very simple, but new, way to analyze data that had changed his university in a noticeable and permanent way. He reported that the previous qualitative approach was now balanced by quantitative methods. Others now modelled ways of doing interdisciplinary or participatory research and have encouraged the further spread of these methods. Innovations were also used by government officials to inform or direct policy. In some cases, the market, and not the government, was the dominant mechanism by which the innovations reached a wide audience. In one case, a handpump was developed and 7000 units were sold throughout the country. In another project, over 800 corn dryers and shellers were manufactured and sold by local companies.

Examples of Innovations

- Model developed to simulate saltwater intrusion into groundwater
- Introduction of quantitative research methodology to an institution
- Techniques developed and refined to increase carp yields through induced spawning
- New methods of harvesting and storing rice improved yields and reduced spoilage at the national level
- Advances in post-production equipment (e.g., dehuller) extended the shelf life of milled grains and reduced dependencies on imported grains

Table 11. Project Leaders and Innovations (n=317)

Type of Innovation	%
Research methodology	57
Research technology	37
Information system/service	37
Research tool	34
New resource management	28
Computer software	17
New curriculum	16
Patented technology or product	6

Impacts on Beneficiaries

Although it is difficult to extrapolate a cause-and-effect relationship among IDRC support, changed policy, and benefits to the population, the project leaders believed that policy changes had had a positive impact on beneficiaries (e.g., local communities). Interviewee accounts of impacts on beneficiaries included:

- In one country, Invermectin, a drug used to treat Onchocerciasis was not well known and was rarely used. As a result of the IDRC project, the government began to make the drug available;
- Some projects led to improved communication between doctors and their patients thus reducing barriers to full, effective medical care;
- Pump projects delivered clean water to communities and also gave them opportunities to create revenue-generating activities around the pump such as market gardening; and
- One researcher noted that the methodology he had adapted had helped encourage political participation among the economically disadvantaged of his country.

Follow-up Support

Although many respondents discussed the positive impacts that IDRC-funded projects had generated in terms of policy development and innovations, an equal number suggested that development impacts would have been greater if IDRC had provided follow-up support (e.g., developed networks of past project leaders). In the same vein, a few of the researchers suggested that the Centre should take advantage of research results after projects are completed. Some of these suggestions seem particularly timely considering the attention the Centre is paying to income-generating activities. For example, one project leader recommended that the Centre develop cooperative policies with industry to carry on with results. Another complained that IDRC had pulled out financially when he went to local production of equipment he had developed with the Centre's assistance. In the interest of long-term sustainability, another project leader encouraged IDRC to strongly consider support for private-sector initiatives in research and development, particularly small-scale Southern firms and companies.

Gabriela Castillo Morales

Renée Richero

Ignacio Ramirez

Before the IDRC-supported project, I was working on my own. During the project I got to work with geographers, doctors, epidemiologists, and I understood the complementarity of various disciplines. The work was easier and more comprehensive. An interdisciplinary research approach is now included in all my projects.

The National Government appointed me to assist in drafting the proposed new land tenure law as a result of my experience as a project leader.

We held meetings in communities where people were encouraged to voice their opinions. Although this took longer, through this approach we realized rare and important things that may have been otherwise overlooked. I am using a similar technique today and am learning more.

Results and Outlook

Introduction

In the past 25 years, IDRC has funded $1.5 billion worth of projects and has been associated with more than 4000 project leaders (90% of them from the South). Underpinning this support is the belief that Southern researchers are not only best suited to find answers to development problems, but also to serve as agents of change in their communities, countries, and regions. The findings of this study could influence the Centre's future performance in strengthening the capacity of Southern researchers to conduct development research. To the extent allowed by the data, IDRC's performance has been assessed in relation to two questions: What are the results of IDRC's capacity-building efforts? What are some of the trends that need to be monitored?

Results

Project leaders considered IDRC project support to have been an important means for their professional development:

(1) It provided them with a venue to **develop and practice skills and gain new perspectives on development issues and concepts**. IDRC has played a role in improving researchers' ability to conduct scientifically rigorous and meaningful research. It has also helped open new avenues of enquiry by exposing project leaders to new methods and approaches to research, such as the use of multidisciplinary research teams and methods of participatory research.

(2) Project support (including IDRC-sponsored participation in conferences and workshops) gave researchers opportunities to **develop professional contacts** they would not otherwise have had. This exposure has had several benefits for project leaders: it improved their access to the international scientific community and thereby enabled them to make contact with the best researchers in their relevant fields; it created opportunities for them to deal with government officials and policymakers; and it enhanced their profile and reputation within the national and international research community.

(3) IDRC support also **helped to strengthen the capacity of project leaders to pursue their research agendas**. Exposure and recognition have heightened the status of project leaders both nationally and internationally in research and donor communities. As a consequence, they have found it easier to obtain funding and pursue their research interests.

(4) Involvement in IDRC-supported projects **strengthened the ability of project leaders to influence policymaking**. Project leaders used project findings to inform public policymaking. In other cases, they reported moving to other professional positions (in academia, government, or the NGO community) and using their expertise and contacts gained through project work to influence policy.

(5) IDRC project support **brought researchers and research users closer together** in mutual cooperation. Community-oriented research encouraged project leaders to find ways to have their research informed by local realities; communities benefited from the use of research results.

(6) **A decentralized, flexible, and responsive approach to program delivery facilitated the pursuit of relevant and effective research.** IDRC's approach to project development and management was endorsed by project leaders because it engendered a sense of empowerment. Project leaders reported that the Centre was sensitive to changing situations and that this gave them the freedom to shape and orient the project to meet local needs.

(7) **Formal and informal training complemented skills obtained on-the-job**. Many project leaders gained sector-specific technical skills as well as more general skills through IDRC supported training, particularly in data processing, communications (writing proposals and reports), and financial management.

Outlook

Project leaders believe that IDRC has played a significant role in strengthening their capacity to conduct research. The Centre's approach to capacity building is characterized by the use of a variety of methods to achieve this objective – training, workshops, and networking. Its management style was perceived as flexible and responsive to the needs of project leaders. Trends in the nature of its support, however, point to potential areas of concern.

Age and Level of Experience

IDRC's research support has the dual objective of building research capacity and providing useful research results. As Dottridge has pointed out, projects may, however, "range across the entire spectrum from pure capacity [building] to a pure results orientation."[7] Older, more experienced researchers can be expected to deliver higher quality research results, whereas, younger researchers are likely to benefit more in terms of capacity. This study provides evidence for this claim – that for certain skill types, younger, less experienced researcher do significantly improve their skills relative to older, more experienced colleagues.

Evidence of the tendency for the Centre to work with older project leaders over time likely reflects the maturation of the research systems IDRC supports (i.e., average age and education of researchers has increased). Although older project leaders may often lead teams that provide younger scientists with opportunities to develop valuable skills and knowledge, this approach may not bring to younger researchers the same skills in project management they would learn as project leaders. If the Centre wishes to maintain its historic emphasis on building the capacity of younger researchers as project managers, it should examine the extent to which it supports this group early in their career.

Program Delivery and Flexibility in Building Capacity

Capacity building is a multifaceted process: the development of capable researchers is the result of multiple lines of effort. A number of mechanisms or practices influence capacity: "on-the-job" learning, training, the opportunity to network, and collegial support from program staff. The variety of contexts in which capacity building takes place challenges the Centre to maintain this range of approaches.

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7 Dottridge, Tim. *Strengthening Research Capacity: The Experience of the International Development Research Centre*. Ottawa: IDRC, 1993. The balance between capacity building and results has long been an area of strategic concern for the Centre. See Hopper, W.D. *Research Policy: Eleven Issues, Outline Statement by the President to the Board of Governors of the IDRC*. Ottawa: IDRC, 1973.

To respond effectively, program staff require a full complement of "tools." If the mix or scope of practices and options available to program staff is reduced, this may ultimately reduce the flexibility that has been an important source of IDRC's effectiveness in capacity building. For example, the perceived decline in direct contact with program staff reported by project leaders may indicate constraints to this requisite flexibility and have potential ramifications for capacity building and the quality of research results. Project leaders value the support they receive from program staff because of the professional benefits it brings to them and the value it adds to their research. Many project leaders expressed the need for even greater contact with program staff. Inexperienced project leaders often rely on program staff for critical support, such as input into project design and review of findings. Any decline in contact may mean that delivery of these benefits will diminish and that the quality of research may be affected.

An important question that arises from this analysis is whether effective substitutes exist for the various components of the capacity-building mix. For example, do IDRC-funded networks compensate for a decline in direct contact with program staff? What types of networking activities might be the best substitute – traditional workshops and seminars, or the promotion of electronic networking? Are they cost-effective alternatives?

Program Delivery and Organizational Restructuring

The reported overall decline in contact between project leaders and IDRC staff is linked to periods of organizational restructuring and staff turnover. Project leaders reported that communication had suffered during periods of restructuring when project responsibilities were shifted between Program Officers or Regional Offices, that they had received little project support, and that their messages to program staff went unanswered.

Breakdowns in continuity such as these have an opportunity cost for both the researcher and IDRC. The inability of project leaders to contact and consult with program staff can lead to delays in decision-making and, ultimately, in project completion. For the Centre, communication breakdowns also represent a cost in terms of reputation. IDRC's reputation depends in part on the confidence that individual researchers have in IDRC's ability to effectively support them. Any weakness in this area may be perceived by the research and donor communities as a symptom of a general organizational weakness. It could affect IDRC's status as a respected leader in the development community.

The problems associated with restructuring underscore the need to sustain continuity during periods of staff turnover or restructuring. An ad hoc approach to the transfer of responsibilities means that projects sometimes "fall through the cracks" and are ignored for extended periods of time. Efforts are needed to ensure the smooth transfer of responsibilities.

Women in Research

IDRC's progress in addressing gender imbalance at the project-leader level has been modest. The proportion of female project leaders has remained relatively low over time. In fact, the percentage of female project leaders has decreased in recent years (from 27% in 1986–1990 to 20% in 1991–1994). Because female researchers are often in the vanguard of research into WID issues (e.g., women in agriculture, women in industry), their relative absence may suggest that the Centre is falling short of its research commitments in these areas.

Reporting Mechanism

This study illustrates that through their association with IDRC, project leaders have gained extensive insights into the Centre's operations. If collected on a regular basis, this knowledge could be used to better inform the Centre's program efforts. A reporting mechanism (e.g., recipient Project Completion Report), that gave project leaders a vehicle to evaluate, among other things, IDRC's technical and administrative management, might be useful.

Conclusion

This study affords IDRC a valuable opportunity to assess its impact on the thousands of project leaders it has funded for over two decades. The findings indicate that, from the perspective of project leaders, IDRC has played a significant role in strengthening research capacity. It has helped develop skills, introduced and encouraged the use of new research methods and approaches, facilitated networking, and advanced the careers of project leaders. However, the survey also traces trends in the demographic and professional profile of project leaders and their perceptions of IDRC's program-delivery practices that point to potential areas of concern. As it evolves and redefines itself in the mid-1990s, the challenge for the Centre is to build on its traditional strengths and explore new methods for delivering its project support efficiently and effectively.

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Appendix A
Methodology

Introduction

Appendix A describes the survey methodology. It reviews how the questionnaire was designed, the manner in which the random sample was generated, and assesses the quality of the data. The same information is also provided for the interview component.

Survey Instrument and Design

A comprehensive questionnaire was designed in collaboration with IDRC program staff and project leaders and then reviewed by Ekos Research Associates Inc., a private research consulting firm. It was made available in English, French, and Spanish. The questionnaire was pre-tested with five past project leaders in Ottawa and overseas. As a result, questions were reordered and reworded.

Sample Size

IDRC's IDRIS database was used to generate a list of project leaders for all IDRC projects (open or closed)[1] from 1970 to the end of 1992. A total of 4,240 individuals were identified.[2]

The Lotus spreadsheet "PSize" was used to calculate the correct sample size representative of the entire population of project leaders. A sample of 352 responses was required (to have a margin of error within +/-0.05, 19 times out of 20). However, because of the likelihood that not all project leaders could be located, and the

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1

All active and closed projects started on or before 31 December 1992 were included in the sample. Because there was a three years lapse from this cut-off date to the mailing of the survey, it was assumed the majority of genuinely active projects would be eliminated from the sample.

2

Based on a NEWPINS report of 9 February 1994 it was calculated that there were 4,240 names in the field category RESEARCHER. This is field 320 in the IDRIS database. It was used to record the name(s) of the individual(s) involved in a research activity (as team leader, researcher, grantee, etc.). Although titles differ (i.e., principle investigator, director, team leader, head, senior research scientist), the researcher's name in this field refers to the project leader. See IDRC IDRIS System Specification, 1990 - Field Definitions, p. 31.

probability that many would not complete and return the questionnaire, it was necessary to use a larger random sample of 938 (calculation for size of random sample: 352/0.75/0.5 = 938).[3]

A random sampling process was used to generate a representative list of project leaders. IDRC Regional Offices were contacted to track down and confirm the addresses and contact numbers of the selected individuals. Names were also matched with addresses listed in the Public Information Program's (PIP) subscription database. If the Program Officer responsible for the project was still with IDRC, they were asked to confirm the location of the selected project leader. In other cases, it was necessary to contact the recipient institution with which the project leader was affiliated during their project work.

Table 1: General Summary of Responses

Random sample		938
Less attrition		
Unable to locate	28	
Return to sender	40	
Northern researchers	23	
Total attrition		91
Functional sample		847
No response		530
Total completed questionnaires		**317**

A total of 910[4] questionnaires were mailed. Of those, 317 were returned completed, (return rate 33.8%, see Table 1). Because the number of questionnaires returned was 317 instead of the anticipated 352; this increased the margin of error from +/-0.05 to +/-0.053.

Data Quality

The distribution of respondents by region and project years was found to roughly mirror that of the general population of project leaders. This supports the claim that the sample is representative.

3

352 - sample required; 0.75 - estimated number of project leaders for which an address could be located; 0.50 - estimated response rate.

4

It was impossible to find addresses for 28 of the project leaders. The sample mailed was thus reduced from 938 to 910.

By Region

For all regions except ASRO, the distribution of survey respondents was ±2% compared with that for the population of project leaders (Table 2). The distribution of ASRO respondents exceeded the population by approximately 6%.

Table 2: Distribution of Respondents versus General Population of Project Leaders (by Region)

Region	Project Leader Population (%)	Survey Respondents (%)
LACRO	30.7	28.9
ASRO	23.6	29.2
EARO	15.7	13.3
WARO	13.1	11.4
SARO	8.9	8.6
MERO	7.6	5.1
ROSA	0.5	0.0

By Project Year

The majority of responses came from project leaders who were first involved with IDRC between the years of 1986 and 1990 (45.3%), which corresponds to the period with the greatest number of projects (36.2%). The sample of respondents from the years 1970-1980 was approximately 8% less than the distribution of projects. One explanation for this difference is the difficulty encountered in tracking the addresses of project leaders from earlier years.

As seen in Table 3, the percentage of respondents from the years 1970-1980 was considerably less than the population (-11.6%). In a test, the data were weighted to adjust for this discrepancy. Weighting did not result in differences in the frequencies or means, therefore, the original data set was used for analysis.

Table 3: Distribution of Respondents versus General Population of Project Leaders (by Project Year)

Project Year	Project Leader Population (%)	Survey Respondents (%)
1970-1980	22.0	10.4
1981-1985	31.2	27.5
1986-1990	36.2	45.3
1991+	10.6	16.8

Survey Administration

Questionnaires with return envelopes were sent in two mailings, one month apart. One month after the last mailing a reminder postcard was sent to those project leaders in the sample who had not responded. A second reminder letter was sent after two months to encourage more responses. Response rates were recorded and follow-up contact was made by the Evaluation Unit to achieve levels of response which were compatible with the data-quality objectives. Answers to the questions in the questionnaire were captured in a Paradox 4.0 database. The open-ended questions were coded in a WordPerfect 5.1 file.

Interview Instrument and Design

Interviews were conducted to provide illustrative and interpretive details to complement the quantitative survey data and to obtain responses that had not been anticipated during questionnaire design. The interview guide was designed by the Evaluation Unit and was available in English (see Appendix B), Spanish, and French. For the most part, the interviews were conducted in the interviewee's office in their language of choice. This provided an environment for candid exploration of issues that were of concern and importance to the project leaders. Lasting 1 to 3 hours, the interviews often included a tour or demonstration of the project or institutional facilities.

Interview Sample

Interviewees were chosen from the group of project leaders who returned completed questionnaires. Selection was based on region, gender, sector of employment, those that rated IDRC high and those that did not. For example, to reflect IDRC's involvement in specific regions, interviews were conducted in six IDRC designated regions: 13 in LACRO; 8 in WARO; 4 in MERO; 9 in EARO; 5 in SARO; and 12 in ASRO. Fifty-one interviews were conducted by IDRC staff during their official travel. Of those individuals interviewed, 39 were male and 12 female. Findings from the interview sample are not representative of the project leader population, but were used to illustrate and expand on information from the questionnaires.[5]

Analysis

The analysis involved an examination of the collected data, statistical and qualitative analysis of the questionnaires, and qualitative analysis of the interview results. Quantitative analysis was performed with SPSS.PC+. Descriptive statistics

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5 To underscore the distinction between data gathered from questionnaires and data gathered during interviews, those project leaders replying to the questionnaire are referred to as "respondents" and those interviewed are designated "interviewees."

such as means and standard deviations were used for continuous data, and frequencies were used to analyze nominal and ordinal data. Cross-tabulations with Chi-square significance, T-tests, Pearson's correlation, and one-way analysis of variance were employed in the second stage of quantitative analysis to determine the difference of means. Content analysis was used to analyze responses from the interviews and the open-ended questions in the questionnaires.

An advisory committee consisting of IDRC staff in Ottawa and the Regional Offices discussed and provided suggestions on the analysis of the quantitative and qualitative data. A private research consulting firm also reviewed the application of the methodology and the analysis. Their comments and suggestions were incorporated into subsequent drafts.

Appendix B
Advisory Committees

Questionnaire Design and Review Committee

Anne Bernard, Social Sciences
Fred Carden, Evaluation Unit
Robert Charbonneau, Public Information Program
Bev Chataway, Library
Tim Dottridge, Policy and Planning Group
Salama Fahmy, Program for Research Innovation
Tracey Goodman, Evaluation Unit
Constance Lim, Human Resource Development
Chris Smart, Special Initiatives Program
Terry Smtylo, Evaluation Unit
Pat Thompson, Iwokrama Secretariat
Philip Ward, Evaluation Unit
EKOS Research Associates Inc., Ottawa, Ont.

Analysis and Document Review Committee

Anne Bernard, Social Sciences
Fred Carden, Evaluation Unit
Tim Dottridge, Policy and Planning Group
Bohdana Dutka, Evaluation Unit
Cerstin Sander, Evaluation Unit
Chris Smart, Special Initiatives Program
Terry Smtylo, Evaluation Unit
EKOS Research Associates Inc., Ottawa, Ont.